

# Early Mesopotamia and Iran

Contact and Conflict c.3500-1600 BC



*Proceedings of a Seminar in memory of Vladimir G. Lukonin*

*Edited by John Curtis*

In ancient times, as more recently, relations between Mesopotamia and Iran were subject to much variation. At certain periods there was close contact and collaboration, and at others hostility and isolation. This book explores different aspects of this uneasy relationship. The volume contains the proceedings of a seminar at the British Museum in 1991, held in honour of Vladimir G. Lukonin and sponsored by Raymond and Beverley Sackler. It was timed to celebrate the opening of the Sackler Gallery of Early Mesopotamia.

The Lukonin Memorial Lecture, or Seminar, has become an annual event at the British Museum at which eminent scholars in the field of ancient Iranian studies are invited to speak. In 1991 four distinguished speakers gave papers on aspects of Irano-Mesopotamian relations during the period covered by the new gallery, from the Halaf period to the conquest of Babylon by the Hittites in 1595 BC. M. Pierre Amiet, formerly of the Louvre in Paris, began with a masterly overview of the subject. Dr Roger Moorey of the Ashmolean concentrated on the exploitation of mineral sources in Iran and areas to the east. Professor Edith Porada of Columbia University in New York spoke on seals and other art objects in Mesopotamia and Iran and discussed the relationship between them. Finally, Professor Hans Nissen of the Free University in Berlin described the beginnings of writing in early Mesopotamia and Iran.


*With 12 colour plates and 61 black and white illustrations*

*Front cover:* Stone basin carved with mythological scenes, allegedly found in Mesopotamia but probably made in Iran, c. 2500 BC.

*Back cover:* Ceremonial copper axe from a cemetery at Khinaman near Kerman, c. 2000 BC.







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# Early Mesopotamia and Iran: Contact and Conflict 3500–1600 BC

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*Proceedings of a Seminar in memory of  
Vladimir G. Lukonin*

Funded by a gift from  
**Raymond and Beverly Sackler**

Edited by John Curtis

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## Acknowledgements

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Other people have helped in various ways, and without their collaboration the production of this book would not have been possible. Bernadette Heaney has provided administrative assistance as well as typing some of the contents onto a computer. She has been assisted in the latter task by Molly Hunter. Lisa Bliss has cheerfully done a lot of photographic work – often at short notice – and Ann Searight has drawn several of the maps with her customary skill. Dominique Collon has kindly checked my translation of Pierre Amiet's article. Last but not least, thanks are due to Carolyn Jones of British Museum Publications Limited who has seen this volume through the press.

# List of Illustrations

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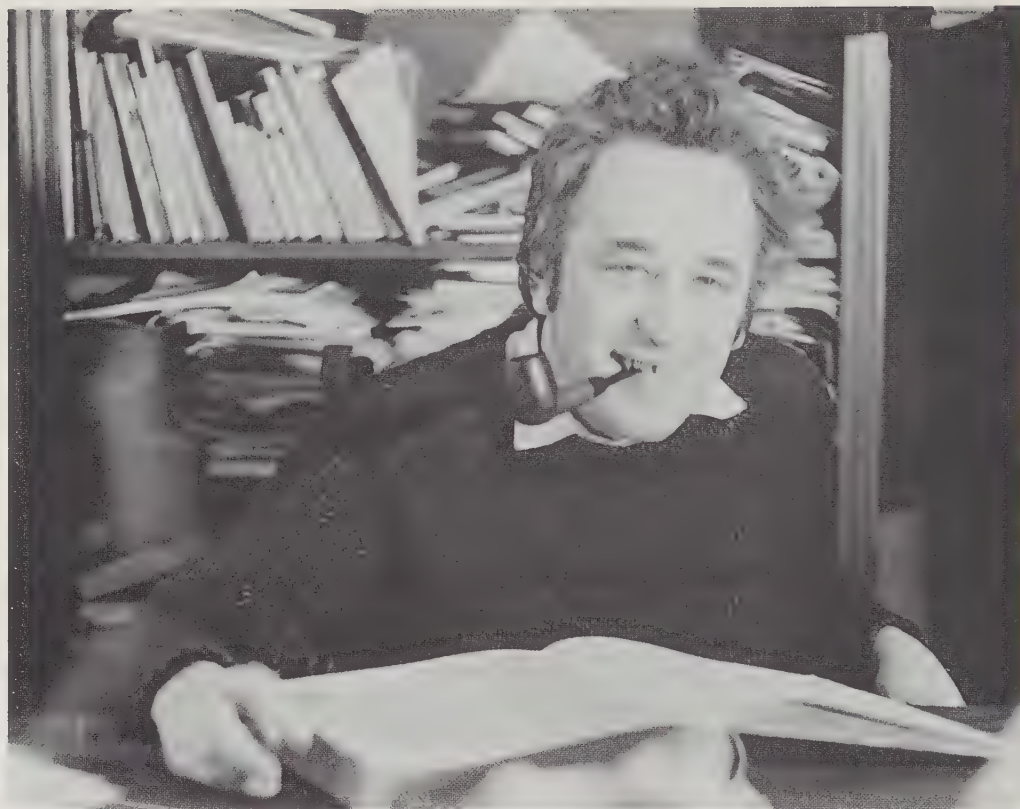
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1 Vladimir G. Lukonin (1932–84)

2 V. G. Lukonin at Novgorod, 1979.



# Preface

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*by John Curtis*

The annual Vladimir G. Lukonin memorial lectures or seminars at the British Museum are intended to honour a distinguished Russian scholar. They were established as follows. Following Lukonin's premature death in 1984 at the early age of 52<sup>(1)</sup>, a group of his friends determined to establish a fund in his memory. It was felt that his remarkable life and career, and his great contributions to Iranian studies, deserved to be commemorated by the establishment of a permanent foundation. Vladimir Lukonin (Volodya) (Figs. 1–2) was born in Leningrad in 1932 and after graduating from Leningrad State University he was appointed to the staff of the State Hermitage in 1957. There he quickly made his name and in 1964, still aged only 32, he was promoted to be Head of the Oriental Department. In his short career he published more than a dozen books, mostly on aspects of Parthian and Sasanian Iran and Central Asia, including a volume on the Sasanian seals in the Hermitage (with A.J. Borisov) and another on the Sasanian silver (with K.V. Trever) that appeared posthumously. His book in the 'Archaeologia Mundi' series entitled *Persia II* (1967) ensured that his name became known to a wider audience outside the Soviet Union. These books were supported by a string of important articles. His scholarly contributions, then, were considerable, but he is also remembered as a captivating and charming man. His warm and engaging personality won him friends all over the world, and in the days of the Cold War it was people like him who did much to bridge the gap between Soviet and Western scholars. On his trips abroad he charmed all with whom he came into contact, and made a lasting impression upon them. He believed strongly in an international approach to scholarship, and it is hoped that the establishment of a memorial fund will reflect that.

The prime mover in this initiative was the Hon. Mrs M.A. Marten (Fig. 4), who during a series of visits to Leningrad had formed a close friendship with Vladimir Lukonin, as well as





3 Raymond and Beverley Sackler in the new Early Mesopotamia Gallery at the British Museum.



4 The Hon. Mrs M. A. Marten, Professor L. Vanden Berghe and Professor R. H. Dyson Jr., in the gardens of Criche House, July 1990.

with other members of the Hermitage staff. So the Memorial Fund was born, and a number of scholars, mainly but not exclusively people interested in Ancient Iran, lent their names to the appeal<sup>(2)</sup>. The Fund is administered by the British Academy, and exists to promote studies of Ancient Iran and adjacent areas as effectively as possible. In practice, this has meant to date giving grants for travel in Central Asia and contributing towards the costs of a conference in London in March 1992. If funds permit, future activities might include the setting-up of a fellowship or lectureship in Iranian studies.

To revert to the launching of the Memorial Fund, a reception was held at the British Museum on 6 July 1988 to mark this event. Amongst those attending were Raymond and Beverly Sackler from New York (Fig. 3). They expressed an immediate interest in the Lukonin Memorial Fund, but rather than giving a donation directly to the Fund that might not have borne fruit for many years, they wanted to do something more tangible and more immediate that would bring some benefit to Iranian studies straight away. They hit upon the brilliant idea of establishing an annual lecture or seminar in memory of V.G. Lukonin. For this purpose, an endowment was given to the British Museum. The only stipulations were that the lectures should be held in the British Museum, and that they should be concerned with some aspect of Ancient Iranian or related studies. This welcome development means that an annual platform will be provided for a senior scholar from anywhere in the world to talk about ancient Iran. This will ensure that the subject is kept alive, and that a lively interest is maintained in it. For this generous and far-sighted initiative Raymond and Beverly Sackler have earned the admiration and gratitude of all those interested not only in Ancient Iran but also in the Ancient Near East generally.

To inaugurate the series, it seemed entirely appropriate that Academician B.B. Piotrovskii (Fig. 5), the long-standing Director of the State Hermitage and a close personal friend of V.G. Lukonin should be invited to lecture. He spoke, on 4 July 1989, on 'Ancient Iran and the Caucasus'.

Professor Piotrovskii reviewed the archaeological history of the south Caucasus from the fourth millennium BC onwards. Particular attention was paid to the Middle Bronze Age burial-mounds excavated at Trialeti in Georgia. He concentrated on those excavated by B.A. Kuftin between 1936 and 1940. In Piotrovskii's view, these burials were of chieftains of prosperous livestock-breeding tribes. The bodies of the chieftains, cremated like Hittite kings, had been placed on wooden four-wheeled bullcarts surrounded by the corpses of cattle and sheep. Piotrovskii described in detail a silver goblet (from Barrow 5) with two bands of embossed decoration. In the upper register is a man seated at a banquet, while a procession of figures wearing wolves' tails moves towards him. In the lower register is a frieze of deer.

This goblet was compared to another found in 1987 by H. Hovhannisyan in a tumulus at Karashamb on the banks of the Razdan River in Armenia. It is more elaborate than the Trialeti example, with five bands of relief decoration. The outer bands show animals such as bears, lions, and panthers. The two central friezes show, respectively, a king at a banquet and a lion-headed eagle, or Imdugud figure, together with headless figures with wolves' tails. Piotrovskii drew attention to the Sumerian elements in the decoration of this vase. Also found in the





5 Academician B. B. Piotrovskii delivering the 1st Lukonin Memorial Lecture, July 1989.



6 Professor R. H. Dyson Jr., in the gardens of Crichel House, July 1990.

Karashamb tumulus was a silver battle-axe comparable to examples from Mesopotamia and Iran; these parallels indicated a date at the end of the third or the very beginning of the second millennium BC for the Karashamb tumulus.

Piotrovskii then described the finds from a burial mound at Kirovakan in Armenia which he had himself excavated in 1948. A full publication has not yet appeared, although most of the material had been available in scattered publications. The material could be compared to a group of early Trialeti tumuli dating from the second millennium BC. Around the cremated body was a collection of black burnished pottery, some of the vessels with incised patterns. Black or red painted ware similar to that from Trialeti was scarce. In addition to the pottery were four silver vessels, including a bucket and a gold bowl decorated with figures of lions. There were also a large number of bronze weapons, some of them comparable to Trialeti types, and a battle-axe of distinctive south Caucasian type that could be related to battle-axes from Iran and demonstrated influences from that area. Connections with Trialeti were less marked in the large burial mounds at Zourtaketi in Georgia which had large 'funerary halls' 152 m square and 6 m high approached by a dromos 40 m in length. Unfortunately these tumuli had been completely plundered in antiquity.

The burial-mounds thus described in the first part of the lecture belonged to a distinctive Caucasian culture dating from the end of the third millennium BC down to the middle of the second millennium. In the fifteenth century BC a new culture appeared known from the excavations of O.A. Mnatsakanian at Lchashen on the shores of Lake Sevan. In water-logged tumuli



there were well-preserved wooden carts and interesting grave-goods that included a Mitannian cylinder seal. The lecture was brought to a close with a slide of another remarkable cylinder seal found in a cemetery at Metsamor in the Araxes Valley. This seal has a hieroglyphic inscription mentioning the Kassite king Kurigalzu. In a Caucasian context, this was a quite unique archaeological find.

Sadly, Academician Piotrovskii died just over a year after delivering the first Lukonin Memorial Lecture<sup>(3)</sup>, but it is gratifying that he was able to give the inaugural lecture. It was much appreciated that thanks to the vision of Raymond and Beverly Sackler many people in Britain had the opportunity to meet this distinguished scholar and to hear him lecture.

For the Second Lukonin Memorial lecture, we turned from east to west. While in his lifetime Academician Piotrovskii dominated Caucasian studies and particularly Urartian archaeology with his pioneering excavations at Karmir Blur in Armenia, so Professor Robert H. Dyson, Jr (Figs. 4, 6), is the doyen of archaeologists working in Iran. His excavations at Hasanlu, between 1957 and 1977, have revolutionised studies of western Iran in the Iron Age and provided a framework for archaeological investigation of that area. His influence on Iranian archaeology has been considerable, as attested by the fact that many people working in Iran in the 1960's and 1970's either began their archaeological careers at Hasanlu or studied under his aegis. In his capacity as Director of the University Museum of the University of Pennsylvania, Bob Dyson has continued to promote Iranian archaeology, and in recent years when further field work has not been possible studies of Hasanlu material have continued unabated. The results of some of this work have appeared in a recent number of *Expedition* (Dyson and Voigt 1989). During his lecture on 10 July 1990, entitled 'Hasanlu and Iran Age Iron', Bob Dyson drew on some of these recent discoveries. He described Hasanlu in the Early Iron Age (Period 5), and also conducted us on a vivid tour through the burnt buildings of the destroyed Period 4 settlement. The wealth of material found at Hasanlu was superbly illustrated, demonstrating to the audience why Hasanlu has come to be recognised as one of the most important archaeological sites in the Near East.

## Notes

1 For obituaries of V.G. Lukonin see Mitchell 1987 and Vanden Berghe and Langerart-Seeuws 1984. The latter is accompanied by a full bibliography.

2 Viz. Professor G. Azarpay, Lord Blake, Professor Mary Boyce, P.H.W. Brown, Esq., Dr. J.E. Curtis, Professor Richard N. Frye, Dr. I. Gershevitch, Professor P. Gignoux, Professor G. Gnoli, Basil Gray, Esq., Dr. P.O. Harper, Dr. G. Herrmann, Professor B. Hrouda, The Hon. Mrs

M.A. Marten, T. C. Mitchell, Esq., Dr. P.R.S. Moorey, Academician B.B. Piotrovskii, Professor E. Porada, Sir Randolph Quirk, Professor David Stronach, Professor L. Vanden Berghe, Sir David Wilson and Professor E. Yarshater.

3 On 15 October 1990. For an obituary notice, see Curtis and Morris 1990. There is an interesting biography of Piotrovskii concentrating on his career in the Hermitage, by Yuri Alyansky (1988).



# Introduction

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*by John Curtis*

The seminar in memory of Vladimir G. Lukonin held at the British Museum in 1991 came about in the following way. In addition to endowing a series of annual lectures or seminars in honour of Vladimir G. Lukonin, Raymond and Beverly Sackler have very generously sponsored two new galleries in the British Museum. These are the 'Raymond and Beverly Sackler Gallery of Early Mesopotamia' (Room 56) and the 'Raymond and Beverly Sackler Gallery of Egypt and Africa' (Room 65). These new galleries were officially opened by HRH Princess Margaret on 18 July 1991 (Fig. 7). It was felt that the Lukonin event for 1991 should be timed to coincide with this auspicious occasion, particularly as both ventures had been supported by Dr and Mrs Sackler and scholars were coming from different parts of the world who would be participating in both events. Thus, it was decided that there should be a one-day seminar in honour of Lukonin on 17 July 1991, the day immediately preceeding the opening of the galleries. The choice of subject was straightforward. Clearly the seminar had to link the contents of the gallery on the one hand, and the Iranian interests of V.G. Lukonin on the other. The gallery covers Mesopotamian history and culture from the Halaf period in the sixth millennium BC down to the end of the Old Babylonian period in about 1600 BC, and includes material such as the treasures from the Royal Cemetery at Ur excavated by Sir Leonard Woolley. During this period, contacts between Mesopotamia and Iran are often evident, but still only poorly understood. In recent years, however, there has been much interest in this subject and great progress has been made in explaining these exchanges. It seemed an appropriate time for a review, both to consider what was now known or could be postulated, and to identify what still remained obscure. The seminar was called simply 'Early Mesopotamia and Iran c. 3500–1600 BC'. Four distinguished scholars were invited to deliver papers (Fig. 8). All had an interest in the problem,





7 HRH Princess Margaret, accompanied by Lord Windlesham and Sir David Wilson, opening the new Raymond and Beverly Sackler Gallery of Early Mesopotamia in July 1991.

or some aspect of it. Monsieur Pierre Amiet, formerly of the Louvre in Paris, and author of the fundamental book *L'âge des échanges irano-mésopotamiens, 3500–1700 avant J.-C.* (Paris 1986) gave us a masterly overview of the subject. Dr Roger Moorey of the Ashmolean Museum concentrated on the exploitation of mineral sources in Iran and areas to the east, a subject which he is examining in detail in a series of volumes about 'Materials and Manufacture in Ancient Mesopotamia'. Professor Edith Porada of Columbia University in New York, the doyenne of Ancient Near Eastern seal specialists, spoke about seals and other art objects in Mesopotamia and Iran and discussed the relationship between them. Lastly, Professor Hans Nissen of the Freie University in Berlin described the beginnings of writing in Mesopotamia and Iran, a subject which is presently the focus of an important research project directed by Professor Nissen in the Freie University.

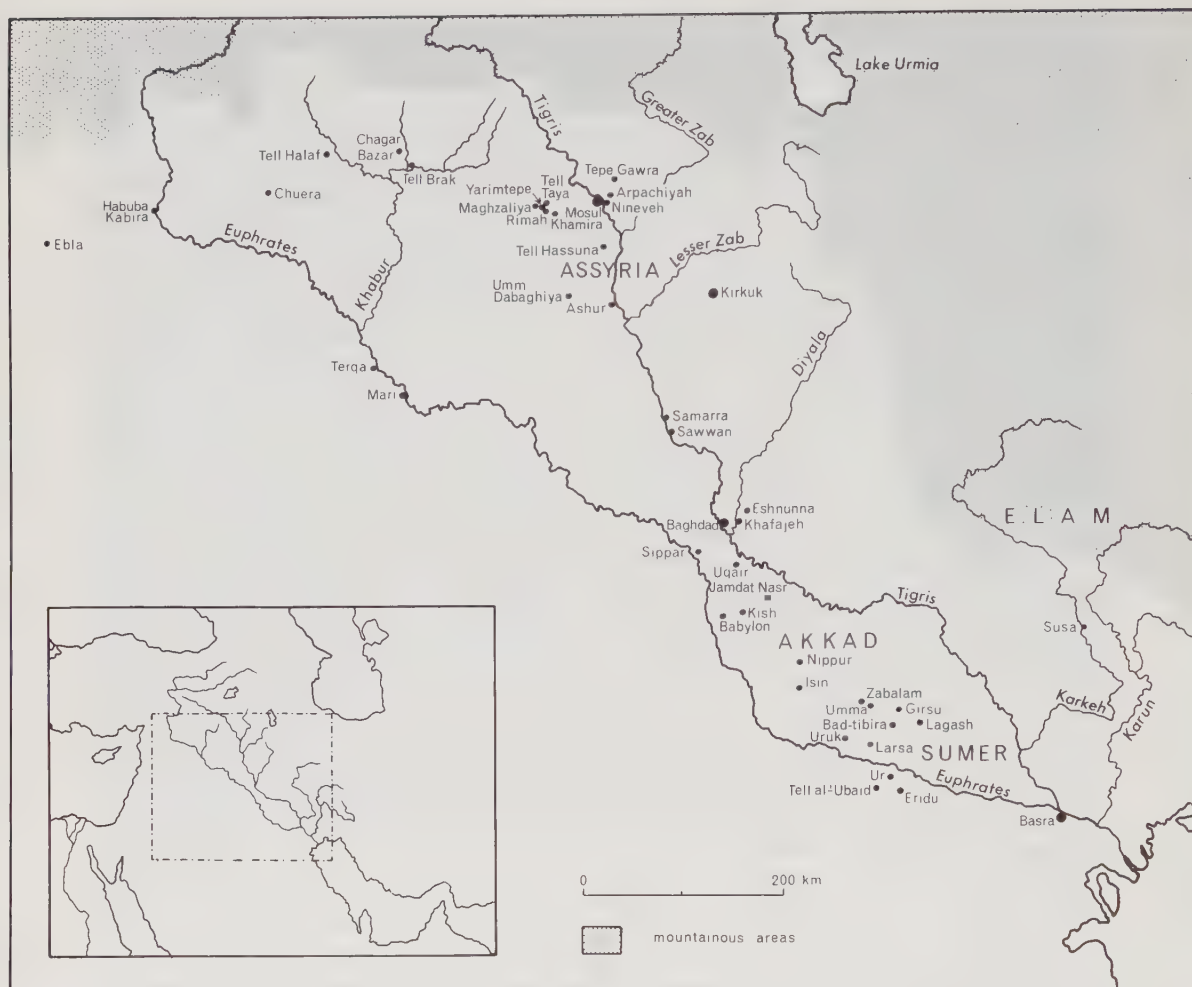
The lands of Mesopotamia – modern Iraq, and parts of Syria and Turkey – and Iran are neighbours, but although they share many common features in other ways they are very different (Figs. 9–10). This is certainly the case geographically, with Mesopotamia straddling



8 The speakers at the Lukonin Memorial Seminar in July 1991. From left: Professor H. J. Nissen; Professor E. Porada; Dr. P. R. S. Moorey; Monsieur P. Amiet.

the Tigris-Euphrates valley and Iran being situated on the upland plateau to the east. Because of this, there are differences in climate, geology, and vegetation, and to these we may add (at least nowadays and probably in ancient times as well) race and language. On the other hand there are many similarities, in areas such as architecture, material culture, religion and diet. In modern times some of these similarities have been brought about by mixing of populations, but to some extent the same situation – contact and conflict – probably existed in antiquity. One part of Iran occupies a special position, namely the low-lying region in the south-west that is really an extension of the Tigris – Euphrates flood-plain. This is the area known as Khuzistan, where the River Karun flows into the Shatt al-Arab. In antiquity this area corresponded in part to the state of Elam with its important centre at Susa. But in fact Elam was not restricted to the lowland region and also embraced the highland area to the south-east around ancient Anshan (Tall-i Malyan) in Fars. Naturally, Elam enjoyed closer links with Mesopotamia in antiquity than other parts of Iran. But even here, there was a chequered history of contact and isolation, and while the situation in Elam may not exactly reflect what was happening elsewhere on the plateau, it is likely that the same phenomenon, but to a lesser degree, prevailed there.

In his review of contacts between Mesopotamia and Iran between 3500 and 1600 BC, Pierre Amiet has described how in succeeding periods of its early history Elam was alternately linked to Mesopotamia or to the highland world of the Iranian plateau. When the highland areas were



9 Map of Mesopotamia.

weak and exerted little influence, lowland Elam was dominated by Mesopotamia, but when they were powerful highland and lowland Elam came together and enjoyed an existence quite independent from Mesopotamia.

Before the foundation of Susa, ceramics from this area of around 5000 BC are closely related to those from contemporary sites in Mesopotamia. A very different picture is evident in the period known as Susa I, when the associations of the Susa region seem to be with the highland areas and the ceramics are markedly different from contemporary Late Ubaid pottery in Mesopotamia. Then, in Susa II, there is a *rapprochement* and Mesopotamian influence is again strong.

In this Late Uruk period we see the beginnings of writing in Mesopotamia, as described by Professor Nissen. He draws attention to the large size of Uruk at this time, especially when





10 Map of Iran showing ancient sites.

compared to other cities in the ancient world such as Jerusalem and Athens. Not only was the city itself large, but in this period, just before 3000 BC, there was a dramatic growth in the population of the surrounding area. Uruk had clearly become the central administrative place of a rich agricultural region that was heavily populated. Nissen argues that it was the consequent need to store complex economic data that led directly to the beginnings of writing. This is borne out by the fact that almost all the early texts are economic in character, combining numerals and pictograms, or at a slightly earlier date containing numerals only. Before that, there had been a system of tokens with specific numerical values. The elementary system of writing developed in Mesopotamia was also exported to the Iranian plateau, with proto-Sumerian tablets having

been found at Tepe Sialk and Godin Tepe. No independent writing system existed in Iran at this time. When an indigenous writing system did appear in Iran, in Susa III, it owed nothing to a Mesopotamian model. As Professor Nissen has explained, in this proto-Elamite writing, known from tablets found at sites like Susa itself, Tall-i Malyan and Tepe Yahya, the system of signs is different, as is the way of arranging the information on the tablet. The reasons why this script should have developed independently from that of Mesopotamia, and why it should have done so later, are still obscure. However that may be, in this period Susa was closely linked to Anshan on the plateau and proto-Elamite civilisation extended at least as far as Tepe Yahya to the south of Kerman.

After the collapse of the proto-Elamite civilisation, in *c.* 2700 BC, Anshan was temporarily abandoned and Susa enjoyed close relations with Mesopotamia. But at the same time, there was a flourishing civilisation in eastern Iran, and also in Bactria and Margiana, which Amiet has called trans-Elamite (see also Pittman 1984). The glories of this civilisation are evident at sites like Tepe Yahya, Shahdad and Shahr-i Sokhta. At Shahdad, in particular, graves excavated by Mr Ali Hakemi and dating from around the middle of the third millennium BC have produced a wealth of material including life-sized busts in unbaked clay and a curious copper flag or standard with an embossed and chased design showing an enthroned figure (Hakemi 1972; Porada 1975: pls. XXXII-XXXIII). It is very likely that these settlements became prosperous through exploiting and trading the mineral riches of the Iranian plateau. There was a strong and steady demand for these raw materials, particularly from Mesopotamia.

In Mesopotamia at this time, Sumerian civilisation thrived, as testified by the riches of the so-called Royal Cemetery at Ur. Many of the metals and semi-precious stones were obtained by the Sumerians, as they had been earlier, from Iran and lands to the east. Dr. Roger Moorey has discussed this interesting question and shown that for the Sumerians these places were a mythical land, rather as for the Spaniards El-Dorada was a legendary country full of gold and precious stones. This is reflected in poems – albeit written down later – such as *Enmerkar* and the *Lord of Aratta*.

Perhaps the most obvious fruits of this trade from Iran to southern Mesopotamia were the elaborate carved vessels of chlorite, a soft greyish-green stone that derives from eastern Iran. A particularly fine example, probably carved in Iran although this is not absolutely certain, is in the British Museum (Pl. 1). It is a straight-sided cylindrical basin, that is unprovenanced but is sometimes said to come from Khafajeh. There is decoration all round, showing a ‘master-of-animals’ figure wrestling with serpents and tending hump-backed bulls. There are also lions in the composition, and a bull is being attacked by a lion and a vulture (Barnett and Wiseman 1969: no. 5). Often these chlorite vessels have inscriptions on them, such as fragments from Ur (Pl. 2) showing a hero struggling with a caprid and a long-necked monster with lion’s head (Woolley 1956: pl. 36, U231). The inscription reads ‘Rimush, king of Kish, conqueror of Elam and Parahshum’, clearly implying that the finished vessel was brought from Iran. Another category of soft stone objects that originated in the ‘trans-Elamite’ area were rectangular plaques with semi-circular handles, usually with elaborate carved designs, mostly geometric. It

is sometimes suggested they were weights, but they may also have had a magical purpose. An example now in the British Museum (Pl. 3) was found at Ur by J.G. Taylor (Hori 1986: 34, fig. 2).

For more than half a century at the close of the third millennium BC, Mesopotamian kings of the Third dynasty of Ur controlled Susa, but not the princes of the surrounding highlands, although they strove to maintain political and diplomatic ties with them. This state of affairs came to an abrupt end in 2004 BC when the Elamites attacked and sacked Ur and carried the king Ibbi-Sin off to Iran as a prisoner. This Elamite revival happened under the Shimashki dynasty, who held power for about another 100 years.

In the east of Iran at this time, perhaps spanning the last century of the third millennium and the first century of the second millennium BC is evidence of a particularly brilliant civilisation which is only now beginning to be understood and appreciated. This civilisation is attested, for example, in period IVA at Tepe Yahya. Commenting on this level, Carl Lamberg-Karlovsky has written: 'We believe that in time a number of IVA "towns" will be discovered and excavated in this area of Iran. We believe these towns represent a cohesive political, economic and social polity which, being on the distant frontiers of Elam showed only minimally in their developments' (Lamberg-Karlovsky 1977: 43). From this period also dates the latest and richest group of graves at Shahdad, those in Cemetery Area A. Probably also of this date is a grave-group including a pick-axe with recumbent camel on the back of the socket from Khurab, near Bampur (Lamberg-Karlovsky 1969). Evidently, there was also an important settlement at Khinaman in the Kerman district (Curtis 1988), represented by a group of copper alloy objects now in the British Museum. This material was collected by Sir Percy Sykes in around 1900. The collection comes from graves in what was evidently a large cemetery. It consists of two axeheads, a series of hammered copper vessels, a few weapons and some personal ornaments. The two axes (Pl. 4) are both of a very distinctive type with blunt crescentic blade and flag-shaped crest at the back. On the socket is an embossed oval shape, perhaps representing an eye. On the top of the more elaborate axe there are two free-standing animals, a fanciful winged creature and a lion. There are at least three very similar axes from Shahdad, and from Susa there is a seal impression showing an axe of this kind being presented to an official by Idadu II who ruled over Shimashki at some time between 1950 and 1900 BC (Amiet 1986a: fig. 83). More than half the copper objects in this collection from Khinaman contain significant amounts of arsenic, testifying to the widespread use of arsenical copper at this time.

Perhaps related to the Khinaman axes, and also with a significant arsenic content, is another magnificent implement in the British Museum (Maxwell-Hyslop 1987). Again, it is probably a ceremonial axe (Pl. 5). Elaborate relief decoration on this axe shows a tiger attacking a goat. In its turn, the tiger is being molested by a boar. The stripes of the tiger are skilfully indicated by designs in inlaid silver. This axe was obtained in the northwest provinces of India, now Pakistan, and may originally have been from Bactria. In fact, this flourishing civilisation in southeast Iran had strong connections with Bactria where there was a prosperous culture in the area between the River Oxus (Amu Darya) and the northern foothills of the Hindu Kush. Unfortunately,



however, it is better represented through the products of clandestine excavations than proper archaeological research. For example, the most comprehensive collection of material apparently from this area is the record compiled by Marie-Hélène Pottier of material passing through the Kabul bazaar in 1978–9 (Pottier 1984). In her book, she includes bronze tools and weapons, personal ornaments, mirrors, and a variety of containers and vessels in chlorite and other sorts of stone, some of them richly decorated.

In the period from *c.* 1900 BC onwards Elam was controlled by rulers known as the *sukkalmahs* or ‘grand regents’. During this time the balance of power see-sawed backwards and forwards between Mesopotamia and Elam, but by and large Mesopotamian influence during this period was strong. This is shown by the extensive use of Babylonian in the texts. There is, for example, the bronze tankard in the British Museum collection (pl. 6) made for the Elamite ruler Attahushu and inscribed in a mixture of Sumerian and Akkadian (Sollberger 1968). Babylon was conquered by the Hittite king Murshili I in *c.* 1600 BC, and shortly after it was occupied by the Kassites. These momentous events in Mesopotamia must obviously have had repercussions in Elam, and the period after 1600 BC may be regarded as a new chapter in Elamite history and Irano-Mesopotamian relations.

# The Period of Irano-Mesopotamian Contacts 3500–1600 BC

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*by Pierre Amiet*

FORMERLY MUSÉE DU LOUVRE, PARIS

Before considering the question of contacts between Iran and Mesopotamia (Fig. 11) I would like, with your permission, to tell you a personal anecdote. In October 1977 I found myself at Susa with colleagues who had come together to discuss the results of their excavations in western Iran (Perrot *et al.* 1979). While listening to them it occurred to me to ask how we could explain the series of breaks which had been demonstrated in the Susian chronology and, at the same time, the series of eclipses known in the Elamite civilisation in the course of the periods we were seeking to define and delimit. I was then reminded of a visit to the excavations at Chogha Mish, directed by Helene Kantor. I had been very surprised to see there a series of large painted bowls earlier than the foundation of Susa and related to those from Eridu in the extreme south of Sumer, dating from around 5000 BC (Delougaz and Kantor 1972: 22, pl. Vb). A similar bowl had formerly been found by R. de Mecquenem at Tepe Djowi near Susa (Amiet 1966: fig. 6). It suddenly occurred to me that the Mesopotamian affinities of this type of vessel were in stark contrast to the overwhelmingly highland character of the ceramics contemporary with the foundation of Susa. This pattern was repeated when Susa re-entered the Mesopotamian orbit in the second period of its history, only to leave it again in the third period, called proto-Elamite, and to come back much later during the long centuries of the third millennium BC. So it became clear that Susa was alternately attached to the two antithetical worlds of Mesopotamia and the plateau, an alternation which, it seemed to me, reflected the dual nature of the two ethnic elements which co-exist in the region to this day (Amiet 1979a; 1979b). These Persian and Arab inhabitants have given to the same country two different names, Khuzistan in Persian and Arabistan in Arabic. In short, it appeared to me that throughout its long history of five millennia and even previously, Susa was inevitably attached alternately to whichever of these two popu-

lations was dominant. They are representative of the two opposed 'worlds' at the frontier of which the town was built, at the intersection of routes which brought exotic products before continuing into Mesopotamia. But these contacts, established since prehistoric times, were expanded principally in the course of an age that is quite well delimited; in fact, a specific period marked in the beginning by the creation of what resembled colonies, then by the creation of related civilisations beyond Elam, and finally by their disappearance into obscurity around the seventeenth century BC<sup>(1)</sup>.

The painted bowls of Chogha Mish, of Tepe Djowi (pl. I) and of Eridu are valuable indicators, but in the absence of other more explicit evidence it is not possible for us to specify the nature of the implied contacts, whether they be migration or even a form of conquest. By contrast, at the time of the foundation of Susa, or 'Susa I'<sup>(2)</sup>, the civilisation of the new settlement, soon to be dominated by a strong citadel, differs profoundly from contemporary Mesopotamia, as represented by the Late Ubaid culture. The affinities of the most characteristic evidence, such as the decoration of the painted vessels (pl. 7) and the seals, are completely highland despite the greater wealth of Susa. And it is also from the highlands that the copper found in the Susian tombs originated. But the copper did not go beyond Susa into southern Mesopotamia which likewise, to all intents and purposes, did not know the seal. Use of the latter reveals at Susa the beginnings of an administration (Amiet 1986b), similar to that at Tell-i Bakun in Fars (Alizadeh 1988), but more developed, with the appearance, in the iconographic repertoire, of figures anticipating representations of the priest-king in historical times.



11 Map of the Iranian plateau showing its location between southern Mesopotamia and the Indus Valley.



Everything changed with period II of the Susa stratigraphy when there was complete integration with the world of south Mesopotamia, which can now be defined as proto-Sumerian, at a time for which the city of Uruk is the type-site. The ceramics, produced largely on a potter's wheel, are the decisive indicator, along with the birth of arts specific to the historical periods, such as sculpture (pl. 8) and the engraving of seals that from now on were cylindrical (Amiet 1980: pls. 9–13 bis, 43–7, 120). The growth of an accounting-system was also decisive and was soon associated with writing, the invention of which marks the civilisation as potentially historical, dominated by the institution of kingship, as indicated in the iconography of Uruk. But at Susa the 'priest-king' of Sumerian type appears only once (Fig. 12), and the new economy seems to have been managed by individual initiative rather than by the royal state (Amiet 1988a: 14–16). Whatever may be the truth of this, this period saw the coming together of the great Mesopotamian plain and adjacent regions. While settlements resembling colonies of Sumerian type were being founded in northern Mesopotamia, the centre and north of the Iranian plateau were at the same time being visited by people who may conveniently be called the 'merchants of Susa', notably at Tepe Sialk and at Godin Tepe.

It remains difficult to specify who took the initiative in the contacts that all this implies, and what was exchanged, but we know that exotic products, essentially minerals, are from now on present in the plains of Mesopotamia and its Susian annex, where naturally-occurring deposits are lacking.

The third period determined by the stratigraphy of Susa is strictly symmetrical, that is to say that as in the time of Susa I, there was a break with Mesopotamia. Above all, Susa was annexed by a new cultural and probably historical entity which grew up around the city of Anshan, which was founded at this time in present Fars<sup>(3)</sup>. This entity, certainly highland in origin, expressed itself in an original writing system used for a non-Sumerian language that we describe as proto-Elamite. The same name is applied to this civilisation which foreshadowed that of fully historical Elam. The proto-Elamites also established, as the proto-Sumerians had done previously, a route which led them at least as far as Seistan, via Tepe Yahya in southeast Iran.



12 Drawing of cylinder seal impression from Susa showing a temple. Late Uruk period.

However, it is important to note that this break with Mesopotamia only affected the higher forms of civilisation, namely writing and art as represented by rare sculptures and above all by the cylinder seals used by scribes (pls. 9–10). The inspiration of these seals is almost exclusively animalistic (pl. 11), and the artists have taken delight in portraying what seem to be fables, in a very characteristic style. By contrast, much of the ceramic assemblage remained either identical or closely connected throughout Mesopotamia and the proto-Elamite domain. One must also note that a largely non-figurative category of cylinder seals characterised by sinuous or angular decorative motifs, leaf patterns and, very occasionally, strongly stylised animals, was distributed at the time in proto-Elamite Iran, along the Mesopotamian foothills and well beyond, in particular in the region of the Diyala River and in Assyria (Collon 1987: 20–23). These so-called Piedmont seals should not therefore be defined as proto-Elamite, even though an original series has been found in Seistan (pl. 12). And in fact, they were hardly ever used by the scribal elite for sealing written documents. They therefore take on a character that can be described as popular, and their distribution implies the existence of a vast international Irano-Mesopotamian community which remains difficult to understand. But a comparable community, although clearly more archaic, had been established to the east of Iran and had been reached by the proto-Elamites, at the extreme point of their advance into Seistan (Lamberg-Karlovsky and Tosi 1973; Amiet 1986a: 132 ff; Deshayes 1975). It extended, according to the evidence of its painted pottery, from eastern Turkmenia to the south of the Hindu Kush mountains, to Mundigak and to Quetta. In addition, to the east of the Caspian Sea a civilisation had appeared that broke away from the prehistoric tradition by giving up painted decoration in favour of a grey pottery of very pure form. This civilisation was established in a comparable fashion to that of the proto-Elamites, at the same time on the northern edge of the plateau, at Tepe Hissar, and in the Gurgan Plain, at Tureng Tepe. These sites, just as Shahr-i Sokhta in Seistan, developed progressively in the course of the third millennium BC to become large settlements of artisans staking out a vast trading-network which enabled them to transmit and to work exotic stones and metals. In short, rich and complex exchanges were set up in the east of Iran in the early third millennium, alongside the civilisation of the great alluvial plains of Turkmenia and of the Indus, which were able to come progressively to maturity by benefiting from these contacts.

The proto-Elamite civilisation collapsed as from a single blow, without any previous sign of decadence, around 2700 BC, apparently the victim of an urbanisation that was excessive for the agricultural and demographic capacities of its cradle, present Fars, where the city of Anshan was abandoned. While the proto-Elamite highlands went over completely to a nomadism that is imperceptible in the archaeological record, Susa fell back again for many centuries into the Mesopotamian orbit, becoming a modest city of Sumerian type, in the period of the flourishing civilisation of the archaic dynasties. This is illustrated very clearly by the furnishings of its temples (Fig. 10) which are identical to those which have been discovered, for example, at Khafajeh and at Mari.

But as soon as the proto-Elamite civilisation disappeared we see a rebirth beyond its original

domain in Susiana and particularly in Fars, of three original civilisations dedicated at one and the same time to the exploitation of the mineral riches of the plateau, to their manufacture into specific artistic products and to their trading, in all probability in answer to the demand of the great civilisations of Mesopotamia, and then of the Indus when it reached maturity around the middle of the third millennium BC. These highland civilisations can be distinguished from those of Mesopotamia and the Indus, as from the rival proto-Elamite civilisation, by an urbanisation that was faint or non-existent, and inversely by the importance which must be placed on a distinct type of 'artisanal nomadism', quite different from the nomadic transhumance of traditional pastoralists.

The first of these civilisations was revealed by clandestine excavations starting in 1929 in the high valleys of Luristan, on the western edge of the plateau from where they dominate Mesopotamia and Susa. The pillaging of the necropolises provided a source of information that was difficult to interpret, and we had to wait until the Belgian excavations of L. Vanden Berghe to be specific about the chronological development of a civilisation represented exclusively by necropolises devoid of any traces of habitation, and therefore attributable to nomads (Vanden Berghe 1968; 1970; 1973; Calmeyer 1969). A first great period, if we exclude prehistory, embraces the birth of this civilisation around the middle of the third millennium down to its decline around the eighteenth century BC, that is to say the end of the period of inter-Iranian contacts that interests us. In the very large tombs, intended probably for tribal groups, were deposited painted vessels directly connected with those of Susa at the same period. In addition, however, grave-goods provided evidence of a rich metallurgical industry, in copper and already in bronze, superior to that of Susa and connected with that of Mesopotamia. The true spirit of these highland metallurgists is shown in the decoration of the ceremonial weapons and tools of Mesopotamian type: figures of animals adorn tubular mace-heads (pl. II) and especially the sockets of axes (pl. 14). Later, the shafts of axes were shaped like the head of a wild beast spitting out the blade (pls. III–IV). Starting in about 2300 BC there appeared amongst the grave-goods a series of objects inscribed with names of kings of Akkad, which are therefore evidence of contact with the latter. A similar phenomenon occurred some 1300 years later when Babylonian dignitaries inscribed their names on objects such as goblets or 'situlae' which were certainly made on the spot. It must have been the same in the third millennium, and it is reasonable to suppose, by analogy, that diplomatic representatives or their equivalents, coming from Mesopotamia, stayed amongst the nomads, no doubt to organise the traffic in metal.

A second civilisation developed in the present Iranian province of Kerman, situated to the east of Elam, which properly speaking embraces Susiana and Fars (Carter and Stolper 1984: 136–41). That is why I propose to call this civilisation trans-Elamite. Evidence of it appears on only two archaeological sites that have been properly explored: Tepe Yahya in the south and Shahdad in the east, on the edge of the Lut Desert. They have opened broad horizons which need to be defined by new excavations, for this civilisation is much more diverse than that of Luristan. The discovery at Tepe Yahya of workshops of craftsmen in a green stone called chlorite has enabled us to see this region as the cradle of an industry tied to an art form



representing an original culture. These products enjoyed great favour in Mesopotamia during the third millennium BC, with the earlier group being ascribed to an 'époque ancienne'. This art is represented principally by the abundant decoration on the vases and prestigious objects in the form of handled plaques. It delighted in motifs of architectural inspiration alongside archaizing figures recalling particular traditions illustrated by late prehistoric seals, as for example the master of monstrous serpents (pls. 15–17). But loans from the Mesopotamian repertoire present a special problem. I have no hesitation in explaining them, at least in part, by supposing that some specialists working in chlorite travelled and made the prestigious objects with their exotic style in the land of their Mesopotamian clients. This would explain the presence of the lion-headed eagle and of the bull-man on the vases found at Khafajeh and Mari (Parrot 1956: pls. XLVI–XLVII; Hansen 1975: pl. 77).

A large number of these objects were found in temples which they must have reached thanks to the efforts of a third civilisation: that of the sailors of the Persian Gulf, of the ancient land of Dilmun, to the northwest, and of Magan, in the Oman peninsula (Potts, DT, 1990). These people must have acted as middlemen for the artisan-nomads of eastern Iran. But in contrast to the latter, whom on occasion they transported as well, they were only intermediaries and not the creators of an original art form expressing their own personality. We probably owe to them the very considerable mass of chlorite vases stored on the small island of Tarut, to the north of Bahrain. It is owing to their efforts that copper from Oman was often used in southern Mesopotamia and even at Susa in preference to that of central Iran.

All this illustrates the current of exchanges in the direction of Mesopotamia. But on the other hand, on the border of the Lut Desert which separates Kerman from Seistan (pl. 18), the settlements explored by A. Hakemi have revealed the influence of Mesopotamian art. This is obvious in the funerary statues which are a transposition of Mesopotamian cult statuary, and in the cylinder seals that were also found at Tepe Yahya (Porada 1975: pls. 283b–d, XXXII–XXXIII). Their decoration illustrates a very original interpretation of the nature-based mythology of cylinder seals of the Akkadian empire. Thus we can catch a glimpse of contacts that are indisputable, even if their mechanics remain difficult to specify.

Henceforth, in this second half of the third millennium, the cuneiform documents give us much better information than before on the intensification of contacts with Iran before the great Elamite state came into existence. The ancient proto-Elamite domain, fundamentally dual in nature and bringing together the Susian plain and the southern plateau, was still divided up into a host of principalities too small to form the cradle of an original civilisation. For a short period, around 2100 BC, at the time of the eclipse of the Akkadian empire, the prince of Susa, Puzur-Inshushinak, succeeded in reviving a state which was capable of taking possession of the trans-Elamite regions (pl. 19), to which the story of the Lord of Aratta could have alluded although, to be precise, it was written down a little later. With this single exception, our Mesopotamian sources do not inform us about the great events taking place beyond traditional Elamite territory. Archaeology alone reveals a complex phenomenon. On the one hand, the cities of the craftsmen of eastern Iran such as Tureng Tepe, Tepe Hissar, Shahr-i Sokhta and Mundigak,



were totally or partially abandoned; on the other hand, the trans-Elamite civilisation of present Kerman, which reached its zenith on the edge of the Lut Desert, spread far beyond the abandoned cities, as if going forward to meet the great urban civilisation of the Indus, by taking root to the south of the Hindu Kush, at Quetta (Jarrige 1988: 111 ff) and at Sibri. Alongside evidence of an original art, alabaster vessels were imported there at the same time that they reached Mesopotamia. But in more spectacular fashion, the bearers of this civilisation established themselves in the north, in Bactria (Ligabue and Salvatori 1988) and in Margiana, building there fortified trading-posts on the frontiers of the Central Asian world. In this way an extremely brilliant civilisation was born, apparently related to that which I am calling trans-Elamite; it never became literate and because of this it remained on the margin of history. But these people created luxury industries derived from those of trans-Elam and Elam, at a time when the trappings of everyday life demonstrated local traditions of a robust rusticity. Very characteristic are the ceremonial axes of the same design as those that the Elamite princes hand over as badges of office to their dignitaries; they show also a certain relationship to those of Luristan.

This very remote flowering of Elamite culture corresponded to a dynamism which expressed itself at last, at the dawn of the second millennium BC, in the restoration of a great Elamite kingdom grouping together on the one hand the principalities of Shimashki, the exact location of which is uncertain, and of the high plateau where Anshan had been restored, and on the other hand the Susian plain now liberated from its long Mesopotamian domination. The old law of alternation applies once again in this historical episode of major importance, since the historical memory of Elam takes this as the point of departure by consigning to oblivion the monumental work of the kings of Ur at Susa. Unfortunately, no royal archive has reached us, so that we are deprived of precise information about the vicissitudes of the great Elamite state, the only historical entity in Iran at this period whose kings constantly intervened, with varying degrees of success, in Mesopotamian affairs. And paradoxically, it is Mesopotamian texts which most often provide us with information, in particular the royal archives of Mari at the time of the great Hammurabi of Babylon.

Certainly, Susa remained ethnically and culturally Mesopotamian, that is to say Semitic, but its Elamite princes, who came down from the plateau, made it the privileged crossroads of Irano-Mesopotamian exchanges, the large scale of which can henceforth be glimpsed now that we are beginning to recognise the immensity of the Elamite and trans-Elamite hinterland. Finally, I am tempted to take as the symbol of the richness of these exchanges the image of the queen of Elam as she appears on the seal of Ebarat. She still retains an air of Neo-Sumerian refinement, although she is wearing the full 'crinoline' of her country. Her very original image was adopted as far as the borders of the trans-Elamite world at its furthest extent, in the statues of Bactria (pl. 20) and indeed of Quetta, where the old tufted garment (*kaunakes*) of Mesopotamia was even adopted.

By the eve of the great crisis that occurred around the seventeenth century BC and which saw the extinction of the highland civilisations and, consequently, the end of the contacts that had

been so fruitful, Elam had succeeded in assimilating the Mesopotamian contribution. It had transmitted it, indissolubly linked with its own origins, to the far borders of the world of the plateau. This vast upland country was not yet Iranian, and yet it appears as an astonishing precursor of the prestigious empire of the Persians, some 1200 years later. We glimpse in this way the ebb and flow of history which is subject to rhythms which, although they are never simply repeated, at the same time allow us to understand it better.

### Notes

- 1 This idea has been developed in Amiet 1986a.
- 2 For the excavations on the Acropolis of Susa, see now Canal 1978 and Le Brun 1978.
- 3 For a brief, but very complete, survey of the excavations at Tall-i Malyan (Anshan) see Summer 1988, with bibliography.

# Iran: A Sumerian El-Dorado?

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by *P.R.S. Moorey*

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'I have been assured by such of the *Spanyardes* as have seen Manoa, the emperiall Citie of Guiana which *Spanyardes* call el Dorado, that for the greatness, for the riches and for the excellent seate, it farr exceedeth any of the world ...'

(Sir Walter Raleigh 1596: 17)

## The Problem

The oldest highly organised urban society in the world emerged in the course of the fourth millennium BC in an alluvial plain in southern Iraq rich in bitumen and salt, clay and water, but virtually devoid of good building stone and timber, and lacking metal deposits (Fig. 13). Consequently the Sumerians, its creators, were always to depend upon contacts with the adjacent highlands for many luxuries and not a few vital raw materials, obtained through exchange systems which were in some cases already very old by the fourth millennium BC (cf. Yoffee 1981: 14–17). Whatever role internal factors played in the precocious development of the Sumerian civilisation, it was sustained by materials received from its highland neighbours. This flow of goods was matched by a flow of information. The problem is not proving the existence of such contacts, but understanding how they operated.

It was Sumer's particular advantage that she might choose where she directed her quest for the prestigious and utilitarian materials she required, since many of them were available recurrently in the highlands which bordered the river valley of the Tigris and Euphrates in a great arc from eastern Turkey through into southern Iran (Roaf 1990: map on p. 35). Tin was the only metal of very restricted occurrence, whilst lapis lazuli was one of the very few valued stones not available to the west or northwest as it was to the east or southeast. Gold and silver, copper and lead, many of the common stones and most of the semi-precious ones, above all timber, were widely available in the highlands. Only where bulk transport was necessary, as notably with base metals, common stones and timber, was Sumer's choice restricted by the availability of passage by water. It was here that the Euphrates and the Gulf played so fundamental a role in her supply systems. Overland contact with Iran through donkey caravans was always restricted by the capacity of the carriers and their exposure to predators as they moved.



A study of relations between Iran and Sumer in the early historic periods (*c.* 2750–1750 BC) may draw both upon the evidence of artefacts and inscriptions (*cf.* Kramer 1987). The material evidence has increased enormously in the last thirty years in regions previously little known or wholly unknown to archaeologists, so that the balance of evidence for considering Sumer's eastern, as against her western, connections is better now than it was a generation ago. However, all the relevant inscriptions are from the lowlands. So far as they are understood, the 'Proto-Elamite' texts of the earlier third millennium BC from highland Iran deal only with matters of local administration (*cf.* Damerow and Englund 1989).

Trade has come to dominate modern studies of contact between Sumer and Iran to such an extent that already fifteen years ago Lamberg-Karlovsky (1977:40) was writing of a 'merchant madness imposed on the Iranian Plateau'. The reasons for this attitude are complex; but three factors in particular encouraged it. First, in North America especially, it was part of a reaction against the more extreme internalist evolutionary perspectives of the so-called new archaeology. Second, it arose to some degree from a very optimistic appraisal of the potential of



13 Sumer, Elam and the land of Gutí.

chemical and mineralogical analysis for sourcing artefacts and their materials. Third, it was stimulated by a much more general debate over the scale and significance of long distance trade in antiquity in which Finley's *The Ancient Economy* (1973) and Wallerstein's *The Modern World System* (1975; cf. Kohl 1989; Woolf 1990) might be cited as the seminal texts.

For the purposes of this paper the trade debate may be condensed into two primary questions. First, were the Sumerians great traders, as for instance Kohl (1978; 1979) has suggested by arguing that they created markets in Iran for their surplus goods or were they not, as Leemans (1977), for example, prefers in seeking to demonstrate that Mesopotamian foreign trade was basically an import trade? It may not be a coincidence that the former view is based largely on the evidence of artefacts and highly debatable interpretations of Sumerian narrative poems, whilst the latter rests on the evidence of scattered non-literary texts. Second, what of the inhabitants of Iran? Did they restrict the passage of goods between east and west, thus stimulating the growth of an alternative sea-trade up the Gulf, virtually creating the role of *Dilmun* (Bahrain) as a 'port-of-trade', or were they as interested in the goods the Sumerians had to offer for export as apparently the Sumerians were in the raw materials to which the peoples of Iran directly or indirectly had access?

More particularly, is Kohl (1987: 14; cf. Kohl 1978: 471–2) correct when he writes that the trade between Iran and Mesopotamia '... cannot be dismissed as the relatively unimportant exchange of status markers among participating elites ... the highland communities came to rely exclusively upon the goods, such as textiles and possibly foodstuffs, they received from Mesopotamia and Khuzistan'? Or should we follow Larsen who was arguing at the same time that: 'it is essential to keep in mind that most of the trade served what we would call luxury needs or demands and this again is due in part to the technological constraints on transportation. Thus, import goods in these systems were clearly meant to satisfy the demands of an elite, demands for luxury items which marked rank and status' (Larsen 1987: 55)?

One important fact particularly hampers attempts to study Sumer's commercial enterprises abroad. Her foreign trade is conspicuously absent from the administrative texts at present known to us. Although the records produced by administrators controlling palace and temple estates in Sumer should not necessarily be expected to refer to foreign trade, its continuing absence from them haunts current research into Sumer's contacts with her neighbours. It has given rise to a considerable dependence on the evidence for foreign trade provided by literary texts, particularly with respect to eastern contacts (cf. Pettinato 1972). But, as philologists and literary critics increasingly point out to archaeologists and ancient historians, the literary evidence is a treacherous guide both to the ancient geography of Iran and to the political circumstances there at particular points in time.

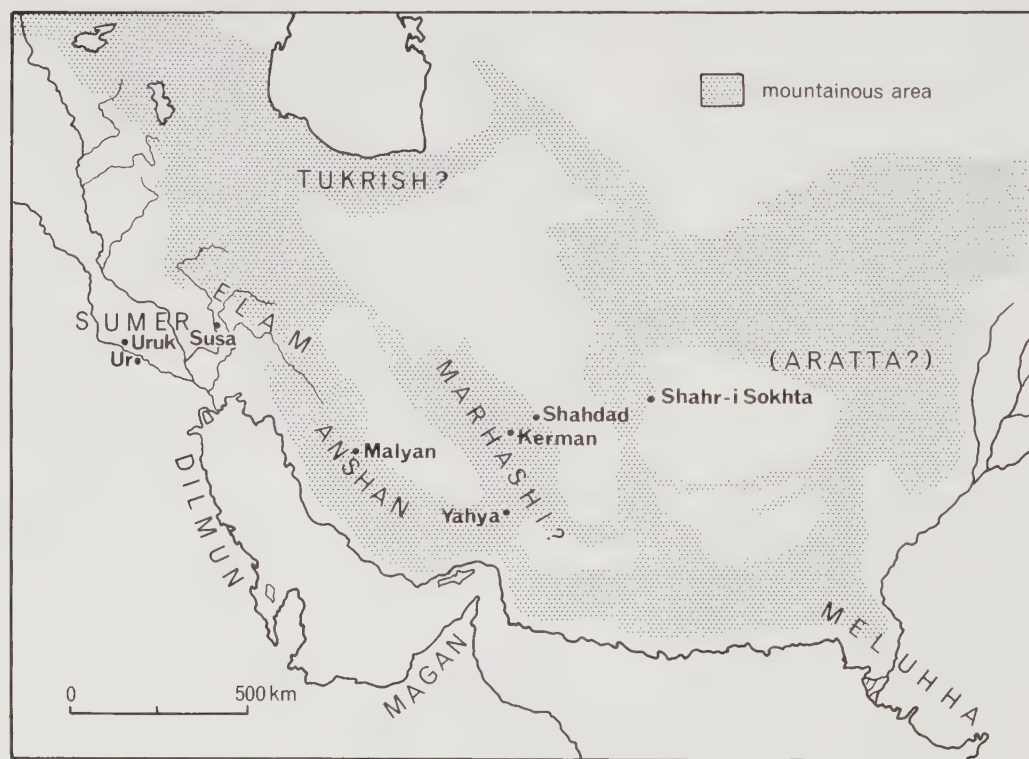
What of alternatives to trade, what of procurement through non-commercial activities such as booty-taking, tribute imposition, and gift-exchange? Are these well-documented complements of warfare and diplomacy to be seen as significant contributors of raw materials and manufactured goods to the storehouses of Sumerian palaces and temples on the one hand, Elamite (or Iranian) on the other? Or were they so sporadic as to make little difference to a

steady flow of agricultural produce and textiles moving east in exchange for metals and semi-precious stones moving west?

### The Sumerian conception of Iran

Before seeking the more probable answers to these questions attention must be given to the Sumerian conception of Iran (Fig. 14). What was it that fascinated her poets? What in general did her people think of their eastern neighbours?

In both the Sumerian and Akkadian languages 'foreign and foreigner' are defined in terms of the east and of mountains, not of the west and of steppe or desert. In Sumerian the word for 'mountain' served also for 'foreign land' and 'man of the mountain' for 'foreigner' (Limet 1972: 124), whilst in Akkadian the word for 'east' came also to mean 'foreigner' (Steinkeller 1980). Literary texts in Sumerian occasionally indicate rather more about lowland attitudes to the peoples of the Iranian highlands. This literature rarely characterises different ethno-linguistic groups as inherently inferior to the Sumerians. However it does in the case of the Amorites in the west and of the Gutu in the mountains to the east (Cooper 1983: 30–3). But, whereas the Amorites are portrayed as merely primitive, the Gutu are characterised as bestial and savage:



14 Iran in the third millennium BC: ancient regions and major archaeological sites.



'Not classed among people, not reckoned as part of the land, Gutium,  
people who know no inhibitions, with human instinct but canine intelligence  
and monkey's features.'

(Cooper 1982: 31).

The inhuman qualities of the Guti, mobile, well-armed and devastating marauders who ended the dynasty of Akkad, c. 2150 BC, were an enduring theme in Assyro-Babylonian texts (cf. Hallo 1971). In the minds of the Sumerians these barbarians occupied the frontier between civilisation and savagery. Archaeological fieldwork has shown that lowland cultures, as defined by ceramics and metalwork, did not penetrate to the east of the 600 metre contour line in the Zagros (cf. Mortensen 1974: map 1). Hereabouts in the highlands northeast of the lower Tigris dwelt the Guti, so to this extent the 'mental maps' of the Sumerians and reality coincided.

Sumerian ideas of inner Iran are more coherently revealed in 'The matter of Aratta', a series of narrative poems describing (pl. 21) the relationship of the city-state of Uruk in Sumer with Aratta, a city or region of unknown location far away to the east (Vanstiphout 1983). These poems survive primarily in copies made in the Old Babylonian Period, in the first half of the second millennium BC, although there are traces of precursors in the Ur III Period (c. 2150–2000 BC), when they were first assembled from earlier oral and written narratives into the surviving compositions. Thus they include material which may have entered the tradition at various times over many centuries.

Jacobsen relates their form and social purpose directly to the economic politics of the IIIrd Dynasty of Ur at the end of the third millennium by explaining them as performed entertainment for Iranian envoys, who were regularly involved in Sumerian efforts at this time to keep trade-routes open either by diplomacy or by force (Jacobsen 1987: 277). In general these narrative poems are in praise of ancient heroes conceived as role models. But, whereas the Sumerian ruler of Uruk is able to enlist unrestricted divine assistance, the ruler of Aratta, the foreigner, the 'other', has been abandoned by the gods, so he has to use his own wit and wisdom in a struggle with Uruk not of his choosing. Uruk and its ruler Enmerkar were conceived as paradigms of Sumerian strength and achievement, whilst Aratta exemplified the exotic and fabulously wealthy regions far beyond the Sumerian horizon in highland Iran, to the point where Aratta became a general epithet for abundance and glory (Cohen 1973: 55).

The Aratta poems, as a rare resource, have been heavily drawn upon by archaeologists and ancient historians in recent years for geographical and historical reconstructions. But, as Berlin among others, has pointed out, 'these are the preoccupations of modern "scientific" scholars, but they are not the questions that the epics are addressing . . . the more fundamental question is what do these poems teach us about the world view of the Sumerians: their values, their role models, their conceptions of the past and, by extension, the conception of national destiny' (Berlin 1983: 24).

A commercial theme is recurrent in these poems. Indeed at the beginning of *Enmerkar and the Lord of Aratta*, when a distant past is being evoked, the absence of traders is taken as a characteristic feature of that remote time, implying their importance in the present:

[no merchant carried wares]  
 nor traded  
 no [sea trader] carried [cargo]  
 nor plied sea trade,  
 gold and silver,  
 copper, tin, slabs of lapis lazuli,  
 [and simple mountain stone]  
 neither of these  
 was brought down from its mountains

(Jacobensen 1987: 281)

These are precisely the luxury goods for which Iran as a whole was renowned among the Sumerians; and it was not just the raw materials, since the skills required to exploit them and to manufacture fine objects were also attributed to Aratta. A broken passage at the end of *Lugalbanda and the Thunderbird* deals with the fall of Aratta and begins to list instructions for transporting booty back to Uruk, including the craftsmen, and possibly also their craft equipment, with the raw materials and finished goods (cf. Oppenheim 1970; Wilcke 1969: lines 409–414). This was customary in antiquity. Through such seizure of craftsmen as well as commodities technical information moved from one region to another as ‘captured technology’. The kind of information accumulated by craftsmen where minerals were actually mined and first processed was rather different from that generated only by secondary working remote from source zones, particularly with metals.

One passage in these narrative poems is regularly cited in discussions of trade between Sumer and Iran in the third millennium BC. In *Enmerkar and the Lord of Aratta*, ‘stones from the mountain’ are said to have been transported to Sumer in exchange for grain. This has been taken to sustain the hypothesis that communities in Iran exploiting local mineral resources for export to Sumer became dependent on her for agricultural staples (cf. Kohl 1978, 1979). Apart from the fact that single instances make poor generalisations, this passage not only serves a very special role in its original narrative context, but also refers to a time of famine not to recurrent necessity. The ruler of Aratta, deserted by the gods, abandons military defence against Uruk in favour of a duel of wits with her ruler: a timeless epic motif. As Jacobsen (1987: 275–6) has recently summarised it: ‘He therefore made his submission contingent on what he considered an impossible and mocking condition. Enmerkar (of Uruk) was to bring grain to Aratta to keep its people alive in the famine; but this grain was to be carried on donkey-back in the usual open carrying-nets, not in sacks. Enmerkar accepted the intellectual challenge and solved the problem by filling the nets with malt, germinated grain felted together in solid lumps’. If a food dependency hypothesis is valid, it will need to be sustained by much stronger evidence than this epic battle of wits and by a much clearer demonstration that the Iranian centres of mining and manufacture were so agriculturally impoverished as to need foreign sustenance and, if they were, that such bulky goods could have been successfully transported to them regularly in quantity.

Sumerian textual evidence for what went into Iran in exchange for metals and semi-precious stones is scarce, since most of the relevant non-literary documents deal with internal exchange

systems. Leemans (1960) and Crawford (1973), using documents of the Early Dynastic III period (c. 2500–2350 BC) from Sumer have defined the ‘invisible exports’ as primarily textiles, fleeces and grain (going at least as far as Susa by water), with perfumed ornaments, fats and possibly dried fish as subsidiary items. However, D.T. Potts (1982: 40–1) has called attention to the considerable body of evidence which indicates that Mesopotamian production of foodstuffs and textiles was largely absorbed locally. How much of this actually penetrated beyond Susa into highland Iran remains an open question, though an exchange of textiles for precious minerals has been a recurrent theme in the history of expanding empires (cf. Larsen 1987: 55).

But was Aratta more than just a literary phenomenon – a mythical El-Dorado compounded of truths and half-truths, a land of dreams rather than realities? The *Periplus Maris Erythraei*, describing Rome’s maritime trade in the Red Sea, Gulf of Aden and Indian Ocean, refers to a people known as Aratrioi when listing the inhabitants of southern Afghanistan and northeastern Pakistan, but their earlier history is unknown (Casson 1989: 204).

Some years ago Michalowski (1986: 134) called attention first to the distinction between those distant resource areas crucial to Sumer that were the subject of myth and legend, such as Dilmun (Bahrain) and Aratta, and those that were not like Magan (Oman), Meluhha (the Indus region), Marhashi and Tukrish (both within Iran); and to the further distinction between those in the legendary category that appear in non-literary texts as actual places, like Dilmun, and those like Aratta, which for the moment do not (cf. Berlin 1983: 22). More recently he has published a reference to Aratta, together with Magan, Meluhha and Tukrish, in an enigmatic fragmentary text, earlier in date than extant copies of the Aratta narrative poems. Its archaic features and reference to Aratta as a source area, though the part describing its resources is lost, may be better evidence for its reality than the poems, if this is indeed a mid-third millennium text addressed to a king or to a deity in the manner of Gudea’s famous building inscriptions some centuries later, as Michalowski (1988) suggests. A brief passage in an early literary text from Abu Salabikh in Iraq, translated thus by Biggs (1966: 175; cf. Cohen 1973: 156):

The *garash*-merchant from the (eastern) mountain(s) brought lapis-lazuli  
and silver,

may be further indication of what Sumerians particularly prized from Iran by at least the middle of the third millennium BC.

This statement may usefully be compared at this point with an enigmatic contemporary text best known from a copy of it found at Ebla in Syria, but also present at Abu Salabikh. This literary fragment is notable for the presence of many terms concerning trade and for a combination of traded goods which suggests the route by water up and down the Gulf and the Euphrates rather than that by land to and from Iran. If this composition originated at Sippar, as Lambert has suggested, this route is hardly surprising, since this city played a key role in Sumer’s transport system by water. Lambert (1989: 33) provisionally translated the relevant portion of the text thus: ‘foreign trade he (Ea) gave to the traders. The lands yielded lapis lazuli and silver, sissoo wood, cedar, cypress, juniper . . . perfumed oil, vegetable oil, honey, aromatics he loaded (?) on boats’.



Although it is rarely possible to plot the regions within Iran mentioned in Sumerian texts accurately on a modern map, their recorded trade goods and resources are significant evidence for this inquiry. Tukrish, mentioned with Aratta, was later renowned in non-literary texts for distinctive types of gold jewellery and vessels (at Qatna and Mari) and for distinctive coloured textiles and garments (at Nippur and in the Tell el-Amarna Letters). In Sumerian literary texts it is given as a source of gold and lapis lazuli (cf. Michalowski 1988: 162–3, with references). It has often been located in Luristan (central western Iran), but all the evidence taken together suggests a location somewhere closer to modern Teheran in northwest Iran on the overland route from Central Asia.

Another major resource area in Iran was Marhashi (Akkadian: Parahshum) variously located in Baluchistan by Vallat (1985: 51), in Kerman by Steinkeller (1982: 244–6; 1989) and northwest of Susiana and east of the Diyala in older studies. It is not yet recorded in texts before the last quarter of the third millennium; but thereafter it appears recurrently for over 500 years as a major highland power at the limits of Mesopotamian military and diplomatic contact. It is recorded as a source of rare animals, plants and stones (Steinkeller 1982: 249–53), which include *dushu*-stone (?agate); *marhashu*-stone, identified by Steinkeller as chlorite/steatite, but possibly a type of calcite, since it is used for stelae (Frayne 1984: lines 72ff.), as well as for vessels; cornelian (cf. Pettinato 1972: 153); and a type of lapis lazuli ‘full of green spots’, which Steinkeller (1982: 50) suggests might in fact be turquoise. However, it seems to be a closer match for the greenish-blue lapis lazuli reported from a seam in the Chagai hills, southwest of Quetta, on the present border between Afghanistan and Pakistan (Berthoud *et al* 1982: 41, n. 21). Marhashi is reported to have been ‘conquered’ by the Akkadian kings Sargon and Rimush. The rulers of the Ur III Dynasty (c. 2150–2000 BC) preferred diplomatic pressure. Messengers passed to and fro; Marhashian soldiers were employed in the eastern highlands and more rarely within Sumer; on one occasion the ruler of Marhashi came to Ur and was given the daughter of King Shulgi as his bride.

It becomes increasingly clear that from a very early stage in the development of Sumerian literature Iran had a special place in the world view of the Sumerians, not shared by the other major resource zones upon which they drew for metals, stones and timber. It was seen as alien and hostile, vast and rugged, fabulously rich in desirable luxuries, in exotica and in the craft skills developed to exploit its local mineral wealth, like El-Dorado half myth, half reality. Conflict was endemic in the relationship, induced on the one hand by fear of invasion, on the other by a desire for booty and tribute. Interwoven with this mutually hostile relationship was a degree of contact through peaceful means; procurement through commerce or gift-exchange of raw materials and manufactured goods for the Sumerian elite. In order to offer even the grossest estimate of the commercial contacts, for no more is possible, and the most basic understanding of their geography, the natural and man-made obstacles to trade must be rapidly assessed.



## Potential obstacles to contact and commerce

### *Transport*

Thirty years ago Leemans (1960: 115) emphasised how vital transport was to bulk carriage in Sumer and her periphery: ‘... barley and most of the other agricultural produce of southern Mesopotamia were reasonably inexpensive articles which could only be profitably exported in large quantities, and large quantities could only be exported where suitable and cheap transport was available. The only cheap and easy means of transport in the Old Babylonian period and the preceding period was by boat’ (pl. 22). Eastwards this was only possible as far as Susa. Leemans noted how texts concerned with trade in regions east of the Tigris only mention goods which could be easily moved on donkeys or which, like animals and slaves, did not require means of transport. The scale of any operation involving bulk movement of staples is indicated by the correspondence of Ishbi-Erra, agent of King Ibī-Sin, last ruler of the IIIrd Dynasty of Ur (c. 2028–2004 BC). He required 600 boats, each of 120 *gur* capacity, to transport 144,000 *gur* of grain from Isin and Kazallu to relieve the city of Ur, when threatened by famine (Jacobsen 1953).

Overland communication between Sumer and highland Iran, whether through Shemshara in the north, through the Diyala area in the centre, or beyond Susa in the south, was significantly circumscribed by rugged terrain, only seasonably passable, and by the absence of waterways for long-distance, bulk transport. Travellers, moreover, in overland donkey caravans were always more vulnerable to human predators than those who travelled by boat, for until camel caravans became the norm routes could never depart far from regular supplies of drinking water for the baggage animals (pl. V).

### *The hostility of peoples*

Restrictions of topography and transport are relatively easy to assess in so far as they are permanent or long term in their effect on communications. However, the extent to which hostile relationships between peoples influence the flow of trade between them is far less easy to establish; it is said, after all, that Napoleon’s armies marched in British boots throughout his wars with the British. It has generally been argued that the ethnic, linguistic and cultural differences which separated the inhabitants of Sumer from their highland neighbours to the east were so great as to explain the mutual suspicion so often evident in texts. The recurrent hostilities they record certainly indicate many opportunities for plunder and tribute, but what effect did they have on commercial contacts? For some scholars they are to be conceived as serious obstacles to major trading enterprises (cf. Muhly 1973: 230; Potts, D.T., 1982: 35), whilst for others they are no more than passing interruptions to long-established exchange networks, so incidental as to be hardly worthy of notice (cf. Kohl 1978).

The documentary record indicates that the prosperous, developing city-states of Sumer, from at least the middle of the third millennium BC, periodically united to prey upon Elam, whilst the Elamites were no less ready to ravage Sumerian cities when the opportunity arose. Sumer was equally at the mercy of highland marauders from the Zagros to the north of Susiana.

Iranian raw materials and manufactured goods were regularly taken as booty, but how much royal workshops depended on it and how much on procurement through trade is wholly obscure. That the Elamites did not always obstruct trade, but engaged in long-distance enterprises is evident from the documentary evidence from Mari in the early second millennium BC for their role in the tin trade (cf. Muhly 1973: 293).

Nor is it easy to establish how far armies from Sumer penetrated into highland Iran and how often (pl. 23). When records have survived, claims may well be exaggerated and virtually all the key geographical designations are still unlocated (cf. Vallat 1980, 1985; Steinkeller 1982; Michalowski 1986). The Akkadian kings (c. 2350–2150 BC) were probably the first to go far into the Iranian province of Fars, the heartland of Elam; but they appear to have plundered it and then rapidly returned, not seeking to establish their rule much beyond Susiana (Carter and Stolper 1984: 11ff). Kings of the IIIrd Dynasty of Ur (c. 2150–2000 BC) record isolated campaigns into Fars, but they were apparently more concerned with securing their position to the northeast along what Hallo (1978) has called the ‘Hurrian frontier’. There they annexed regions in the Zagros, controlling and exploiting them through a carefully structured provincial administration, which secured trade contacts among other things.

As Alster (1983: 52) has pointed out, it is noticeable how Gudea of Lagash, in his description of whence came the materials for his building projects, contrasts peaceful procurement from regions approached by river up the Tigris or Euphrates and by sea up the Gulf with the fact that he had to fight Elam: ‘He (Gudea) smote the city of Anshan (in/of) Elam; into *Eninnu* (at Lagash) he brought its booty for him (the god Ningirsu)’ (Statue B VI: 64–9). Steinkeller (1980: 52), whose translation this is, associates the passage with Ur-Nammu’s successful struggle with the Elamites to free northern Babylonia from Puzur-Inshushinak of Elam who had invaded it c. 2150 BC. Both Ur-Nammu of Ur and Gudea of Lagash would, he argues, have been concerned to reopen trade routes from ‘the Lower Sea to the Upper Sea’, from Gulf to Mediterranean (up the Euphrates corridor) bypassing Elam.

Alster links this passage in Gudea’s inscription to some lines in the Sumerian poem *Enki and the World Order*, where it ‘openly states that Elam was hostile to the Arabian Gulf trade, as the sequence in which Enki blesses first Meluḥḥa (lines 219–37), and then Dilmun (lines 238–41), ends by stating that the houses and city walls of Elam and Marhashi were destroyed’ by ‘the king whom Enlil has given strength’, he seized ‘their metal, lapis lazuli and treasures’ for Enlil in Nippur (Alster 1983: 52 and appendix A). As soon as Sumer was able to draw upon the mineral resources of eastern Iran and Afghanistan through middlemen in the Indus Valley civilisation (ancient Meluḥḥa), benefitting from transport by sea up the Gulf, her reliance on overland contacts with Iran was proportionately diminished to Elam’s disadvantage. This may have been possible by at least 2500 BC.

Booty and tribute should, then, never be underestimated as contributors to the stock of raw materials and manufactured goods of Iranian origin reaching Sumer. King Rimush (c. 2278–70 BC) took 30 minas of gold and 3600 minas of copper (as well as 360 slaves) from Elam and Parahshum (Marhashi) (Hirsch 1963: b 7 X: 49–50). King Shu-Sin (c. 2037–29 BC) took gold,

silver, copper, tin and bronze from the Su-people and the lands of Shimashki (Sollberger and Kupper 1971: IIIA 4e, f), whilst King Ib-bi-Sin (c. 2028–2004 BC) seized gold from Susa and other places (Sollberger and Kupper 1971: IIIA 5b, c). Particularly instructive are some texts which have been identified as lists of royal booty taken from Elam and other parts of Iran and then allocated to temples in Sumer by some of the Ur III kings (cf. Pettinato 1982; Davidović 1984). They include objects of gold, silver, copper and bronze as well as objects of metal and semi-precious stones combined.

This predatory instinct was mutual, as one famous case illustrates. Following the sack of Ur by the Elamites about 2000 BC her king, Ib-bi-Sin, was taken captive to Anshan (Tall-i Malyan) in Fars, whence not so long before his father Shu-Sin had taken tribute. Now it returned with the captive Ib-bi-Sin for, as the renowned *Lament over Sumer and Ur* reveals:

The immense tribute that had  
been stored away was taken by the enemy

(Kramer 1969: 618, line 426)

### Identifying trade networks

The role of booty-taking leads naturally into the final range of evidence to be considered here, the material indicators, since two very distinctive types of stone vessels of Iranian origin found on sites in Sumer bear inscriptions indicative of their arrival there as booty. The Akkadian kings inscribed vessels of eastern type made of chlorite and of calcite to indicate that they were part of the booty seized in campaigns into Iran brought back for royal and temple treasuries in Sumer, whence they were from time to time given as status gifts to favoured royal servants (Potts, T.F., 1989).

In *Lugal-e*, the major Sumerian literary text relating to stones (the majority still unidentified), they are all said to ‘inhabit’ the eastern mountains (cf. van Dijk 1983: 120–2; Jacobsen 1987: 233–42). However, Gudea’s inscriptions (cf. van Pettinato 1972: 139–141), which provide unique evidence for the procurement of stones for temple building and statuary, all refer either to sources to the northwest in Syro-Anatolia (whence most of his timber also came) or to sources accessible by sea in the Gulf. The evidence of other inscriptions suggests that lapis lazuli, from Afghanistan and Baluchistan, with cornelian and agate, often already made into beads, may have travelled as often by sea as they did overland through Iran. However, none at present offers a distinctive pattern of use which might indicate the operation of particular exchange networks.

One metal, tin, and one semi-precious stone, turquoise, may be more instructive in this respect, since their distribution and use as presently understood is distinctive. Tin, as a particularly rare commodity traded over long distances, is useful in any attempt to establish the range and interaction of trade networks. The primary source of the tin used in the Near East in the third millennium BC has for the last ten years been located in Afghanistan. More recently Yener and her colleagues have switched attention to potential sources being exploited at this time in the Taurus mountains of Turkey (Yener *et al.* 1989). If this is fully substantiated by the data currently being processed from their fieldwork, radical reassessments will be called for in



reconstructions of the tin supplies drawn upon by Sumer. But this will do no more, in respect of this investigation, than highlight even more the geographical range of Sumer's options in seeking metals and stones already emphasised here.

Artefacts of tin-bronze, some perhaps accidental or experimental, appear early in the third millennium BC at Susa and by the middle of the third millennium BC are as recurrent there as in Luristan (Malfoy and Menu 1987: 360–2, with tables; Moorey 1971: nos. 2–9, 12–13, 33–4; Amiet 1976: nos. 11–13, 17–18) and in Mesopotamia (cf. Moorey 1985: 17–19; Müller-Karpe 1990). However, tin-bronzes remain conspicuous by their absence from highland Iran before about 2000 BC (Moorey 1982: 87–8; Stech and Piggott 1986), although present in Afghanistan and the Indus cities (Ratnagar 1981: 92–7). This is all the more surprising if, as it is reasonable to suppose, the tin used, at least in Susiana, was coming from Afghanistan. In the early second millennium BC there is clear documentary evidence for tin entering Mesopotamia overland from Iran through Shemshara in the north and in the south through a trade managed by Elamites (Muhly 1973: 292–3). Earlier, Kings of the IIIrd Dynasty of Ur seized it as booty from Anshan, capital of Elam, and from Zabshali in Iran. But by then, as Gudea's attribution of tin to Meluḫḫa seems to indicate, some at least of the metal was reaching Sumer, through sea trade up the Gulf from the Indus Valley perhaps as a result of Harappan enterprise in Afghanistan (Stech and Piggott 1986). Thus the pattern of tin use in highland Iran in the third millennium BC may indicate the predominance of the sea rather than the overland route in supplying Sumer and Susiana. If not, why it was not used by metalsmiths in the transit regions has yet to be explained.

To illustrate how overland exchange systems within Iran might operate without direct reference to Sumerian demand, the case of turquoise may be instructive. After being relatively popular in Mesopotamia for personal ornaments in prehistoric communities, turquoise is conspicuous thereafter by its absence from the archaeological record until the Achaemenid period. However, during the third millennium BC turquoise appears on sites in Iran, such as Tepe Hissar (Schmidt 1937: 229) and Tall-i Malyan (Sumer 1986: 204), whither, Tosi (1974) has argued, it came from inner Kyzyl Kum in central Asia through early urban centres in Turkmenia, not from the sources in Afghanistan (Herat) and Iran (Kerman and Nishapur) exploited later. Tosi's hypothesis may be endorsed by the distinctive 'Turkmenian' stepped-cross shape of a turquoise bead found at Tepe Hissar (Schmidt 1937: fig. 135; cf. Amiet 1986a: fig. 153, top left). Turquoise is as rare in the Harappan civilization as it is in Sumer (Ratnagar 1981: 154). It appears to have travelled along the inland, overland networks of exchange linking Iran and Turkmenia but apparently did not penetrate further west than Fars (ancient Elam).

Thus tin from Afghanistan is largely absent from heartland Iran, but present in Susiana and Sumer, whilst turquoise from Kyzyl Kum is present in heartland Iran but absent from Sumer and Susiana. This pattern correlates with Amiet's (1986a) demonstration in his study of inter-Iranian exchange that many of the distinctive stone and metal objects passing from Bactria and regions to the east of modern Iran into the highland exchange network only rarely penetrated westwards through the Zagros to Susa and even less often beyond. It would, of course, be foolish to regard these as closed systems or to forget that they may reflect no more than the distribution



of the discovered material survivors. A single Bactrian bronze stamp seal in levels of the Akkadian period at Mari on the Euphrates in Syria (Beyer 1989) or a few east Iranian/Afghan lapis lazuli seals gathered together centuries later in the 'Treasure of Tod' in Egypt (cf. Porada 1982) are enough to imperil simplistic generalisations about anything so complex as inter-cultural and economic exchange mechanisms.

### **Weighing up the probabilities**

In the period from about 2750–1750 BC considered here, contacts between Sumer and Iran, though circumscribed by problems of transport and mutual hostility, were recurrent. The place of Iran in Sumerian literature from an early date is alone indicative of the relationship's centrality and vitality. Taken together the evidence of artefacts and texts sustains a minimalist rather than a maximalist view of the overland trade between them, a trade in luxuries for the privileged rather than in staples for the masses. The Sumerians welcomed merchandise from the eastern highlands when they came in the hands of foreign traders passing westwards by land through the Zagros or through Susa, or by sea up the Gulf to Bahrain, ancient Dilmun. Yet there is still no clear indication that any part of highland Iran was locked into an overland exchange system with Sumer pioneered and sustained by expatriate Mesopotamians, as was the famous Old Assyrian trade with Turkey (cf. Larsen 1987). Throughout, royal force of arms, on both sides, secured materials and manufactured goods as booty and tribute to a degree impossible to estimate, though in quantities sufficient, on the evidence of texts, to require that it should always be accounted for in any assessment of the traffic in commodities between the Iranian highlands and the lowlands.

The role of this flow of luxuries in sustaining Sumer's great organisations of state and their hierarchies is everywhere apparent (pls. VI–VII). It is far less clear how it affected the local highland communities engaged in the extraction, processing and distribution of minerals, since so little is known of their subsistence technologies, their social structures, and the extent to which their economies were geared to production for export. Moreover, as the trade goods they received from Sumer have yet to be reliably identified, even the grossest assessment of the balance of trade is impossible.

These exchange systems, whether by land or water, carried information to and fro as well as goods. Craft knowledge and artistic motifs migrated, but how in migrating they were modified to local purposes is by no means self-evident. It may not be assumed, as from time to time it is, that because Sumerian poets attributed Sumerian names and titles, or other Sumerian cultural attributes, to regions within or beyond Iran like Aratta, that there was some coherent communality of culture or ideology across the vast distances travelled by materials. This is no more than the timeless licence of poets in describing a distant land they knew only by repute.

# Seals and Related Objects From Early Mesopotamia and Iran

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Pierre Amiet's magisterial presentation of the age of the Irano–Mesopotamian exchanges (3500–1600 BC) has provided the framework for the development of civilisation in Mesopotamia and Iran from the fourth to the second millennium BC. Into this framework will be set a few problematic works of art dating between the fourth and third millennia BC. Their visual analyses may convey some of the attitudes and ideas of the people who made and used these works.

Amiet placed special stress on the development of Period II at Susa in southwestern Iran, which revealed a complete integration into the southern Mesopotamian world of the period which is called Uruk after the town of that name. In that period the people of Uruk and probably of other southern Mesopotamian towns, who had few natural resources other than the results of agriculture, established a system of relationships tying their resource-deficient homeland to the resource-rich but less highly developed highland periphery (Algaze 1989).

Writing, though developed at this time in Uruk for brief notations<sup>1</sup>, was not flexible enough to tell us something about the people who brought about the great leap toward our kind of life: monumental architecture, three dimensional and relief sculpture, engraved cylinder seals, metalworking and other technologies. Yet there must have been an elaborate organisation that controlled the transportation of foodstuffs, raw materials, and finished products as well as the remuneration of the workers and producers of goods.

In describing the brilliant organisation of the Ur III realm through what he cogently suggests was the master plan of King Shulgi (2094–2047 BC), Piotr Steinkeller has given us an example of a single individual's genius in organising territories reaching from Iran to the Syrian borders and causing them to function as a unit, as an empire (Steinkeller 1987). While not on the same

scale, because of the lack of full written communication, something similar must have existed in the last quarter of the fourth millennium BC, when Uruk sent out its colonists to Syria in the west and extended its influence over Susa in the east.

For the art historian who sees history in the sculptures produced in the period under consideration, the male torso from Uruk wearing a headband (pl. VIII) represents the image of the ruler of this time. The natural proportions of the figure, the musculature indicating his strength, and the tenseness of his gesture convey the image of a man dominating his surroundings on a human level. Through the work of an excellent artist Mesopotamia demonstrates for us the self-realisation of man in this period.

A parallel for the ruler figure exists in two male figures, the better preserved of which, on loan from Robin Martin in the Brooklyn Museum, is illustrated here (pl. X). It has been often reproduced (Porada 1974: pl. XII with refs on p. 163; Barnett 1966: pls. XIX–XXI). Comparison with the ruler figure (pl. VIII) can begin at the head, where a headband or circlet corresponds to that of the ruler. But in this instance it is topped by a cap with the ears and horns of a mountain goat. The eyes are also hollowed out and inlaid with white shell or limestone, from which the dark pupils stand out sharply. The small mouth with descending corners is somewhat similar in both faces. An artificial-looking beard appears to have been attached in the same place, in front of the ears, perhaps at the headband. Most striking is the stress on the muscles of the arm. One thinks here of the emphasis on strength in the analysis of the statue of Gudea by Irene Winter (1989: 579).

This obvious relation of the figures may indicate nothing more than that they were the results of the same stylistic phase. The boots, upturned in front, are worn by an archer in a hunting scene in a cylinder seal of Late Uruk style from Kuyunjik (Nineveh) (Fig. 15). A related scene (pl. 24) is shown on a cylinder in the collection of Jonathan P. Rosen<sup>2</sup>. The style of this cylinder is connected to that of the one from Nineveh and to another from Godin Tepe (Fig. 16) and a third from Surkh Dum-i Luri (Schmidt, van Loon and Curvers 1989: pl. 78, 5 = Sor 1302) in its use of small drillings that form various clusters, some of them in regular forms. Distinctive of most of these clusters is that the drillings are connected by single lines. With two of these cylinders coming from western Iran, an origin in that region seems likely.

The fact that the unperforated Rosen cylinder has a circular hollow on top for some sort of



15 Impression of cylinder seal from Kuyunjik in the British Museum.

attachment supports such an origin in Iran, since a close parallel to the shallow hole on top of an unperforated cylinder exists at Susa (Amiet 1972: no. 758), where a number of unperforated examples were found among proto-Elamite cylinders<sup>3</sup>.

The huntsman in the Rosen cylinder seems to be carrying a quiver and is aiming at a bull that eats the stem of a flower with its head on the ground. A lion with menacingly open jaws follows the bull. Groups of thin lines on either side of the archer's lower body cannot be explained. Equally inexplicable are a lion-headed serpent above the archer and several small figures in the field. Despite these uncertainties, it is clear that the archer with distinctive boots is a hunter. Boots that protect a man's toes on rocky inclines may have been an achievement of the Uruk period because they do not appear in earlier representations<sup>4</sup>. Perhaps this is an indication that our copper figures with similar boots and a headgear derived from horned animals should also be regarded as huntsmen.

The other important piece of apparel of the copper figures with boots and a horned headgear – the slough of a large bird on the back of the figures – may be associated with the discovery by Rose and Ralph Solecki in their pre-Neolithic excavation at Zawi-Chemi-Shanidar in northern Iraq of the bones of wings of very large predatory birds and the heads of goats in one mass of bones (Solecki 1977: 42–7; Solecki and McGovern 1980). Rose Solecki suggested that the goats' skulls found with the wing bones at the site may have been paraphernalia for a ritual in which a human figure might have been dressed in a vulture or eagle skin. She thought that such a ritual might have been connected with a burial rite.

It is tempting to associate the combination of goat's horns and raptor's slough of the three-dimensional copper figures of the Uruk period with these prehistoric remains of the heads of goats and the wings of gigantic birds though the meaning may have been quite different.

Richard Barnett associated the copper figures with the numerous late Ubaid or early Uruk stamp seals engraved with the figure of a goat-headed demon usually associated with serpents (pl. 25), which the figure seems to control (Barnett 1966). Occasionally dogs are added to the serpents and the demon may also be associated with birds (pl. 26). These seals belong to the end of Amiet's period Susa I (fourth to earlier third millennium BC), a period when he believes there was a strong influence from cultures developed in the mountainous areas.

On one two-sided stamp seal there is the demon with the serpent on one side and a goat and a



16 Impression of cylinder seal from Godin Tepe v.



serpent on the other (pl. 27). In accounts of medieval Arabic writers cited by Ettinghausen (1955: 273 ff) various horned animals were able to destroy serpents.

Two stamp seal impressions with a goat-headed demon controlling serpents were found at Susa. The one discovered in the modern excavations of Perrot (Le Brun 1971: pl. XXII, 6, couche 25; Amiet 1971: 218) gives an indication for the date of the group. Some scholars have assigned the level in which it was found to the Late Ubaid period; others to a transitional period before the Late Uruk phase<sup>5</sup>. The impressions are surely earlier than the fully developed naturalistic and modelled style of the Uruk period represented by the copper figures of the goat-horned men and the ruler figure which is also seen in a number of cylinder seals<sup>6</sup>.

The evidence here presented from figurines, seals, and bones, associating horned animals and birds suggests that there was an early concept of a creature or creatures, which combined the features of goat and powerful bird in a manner unknown to us; that the human figure with horned animal head on stamps of the Ubaid period was a powerful, shaman-like demon capable of warding off serpents. By the time of the Late Uruk period the meaning of that figure may have assumed qualities of a hunter of mountain goats and other large animals and, in view of the existence of two such figures, perhaps, to be an adjunct of a supernatural being, more important than the pair of goat-men.

The goat-men and the ruler figure belong to a period in which the visual arts had attained a major role. The definitions used here are those given by Esther Pasztory (1982: 9) for the visual arts employed for organised religion in contrast to the aural arts of shamanism, the religion of the simple hunters and gatherers. 'The visual arts are associated with concepts of permanence and display' while the aural arts 'take place in time and their essence is the process' ... 'once they are concluded nothing tangible remains'. Pasztory also points out that 'objects used by shamans are often crude and unfinished in appearance' (Pasztory 1982: 9). This can be said of some of the stamp seals, while the performances which might have taken place with the goat heads and wings of predatory birds in prehistoric Zawi-Chemi-Shanidar could well have been shamanistic performances of which no man-made objects remain.

Related to the three-dimensional ruler figure and the goat-horned men is an enigmatic figure in the Cincinnati Art Museum (pl. IX a-c)<sup>7</sup>. In contrast with the goat-demons of the stamp seals, who seem to control the serpents that they hold, the man is bound by serpents that seem to dominate him. He is shown squatting on his legs, his torso leaning forward as in the posture of a prisoner. From a string or necklace on the figure hang two fish. These associate the figure with water, confirming the interpretation suggested by Wiggermann that the iconographic figure of the nude bearded hero belongs to the *lahmu*, a group of fifty beings, servants of Enki, the god of wisdom, conjuration and the sweet water ocean<sup>8</sup>.

The presence of the fish on the Cincinnati figure probably indicates that the serpents are to be interpreted as water symbols rather than as the poisonous creatures that they probably represent in the stamp seals of the earlier period. An obvious equation of water courses and serpents is found on a chlorite vessel of the so-called Intercultural Style (Fig. 17). The precise function of the serpents in the Cincinnati figure, however, is impossible to guess.



17 Development of a carved basin in the British Museum. (See also pl. 1.)

A second, headless example of the Cincinnati figure is in the Iraq Museum<sup>9</sup>. Both figures may have served to flank a container, a symbol, or a divine figure in whose iconography serpents probably played a role.

In the positive interpretation of the serpents, the Cincinnati sculpture is closer to Iranian concepts than to those common in Mesopotamian art. Perhaps the figures derive from a period of Iranian influence in Amiet's third period that ended about 2700 BC, though there are no supporting details for such an assumption.

Our next objects are small cylinder seals deriving from Amiet's trans-Elamite civilisation. In the centre of the scene on a cylinder seal, once in the collection of Mohsène Foroughi (pl. 28), a goddess appears with serpents issuing from her shoulders and a bull's head above her head (Porada 1964). Chronologically the cylinder belongs to the Akkad period, but the even distribution of the figures throughout the field shows that the cylinder was carved by a seal cutter working somewhere in Iran, beyond the main Akkadian style, probably in the area of Fars and Kerman, the ancient Marhashi, source of gems discussed by Roger Moorey elsewhere in this volume. The main point to be made here is that the figure of a serpent goddess existed in Iranian iconography.

A very fine cylinder showing a related iconography (pl. 29) is in the collection of Jonathan P. Rosen (Porada 1988). Two kneeling figures, one with a bull's head on his own head, the other a lion's head, and both with outstretched and raised arms, flank a radial design in which a figure sits on the calves of its legs and on its upturned feet, holding a serpent in one raised hand. Below the radial design is a mountain from which grow two trees with pointed crowns. Each male figure kneels above a winged, horned, lion-headed dragon. A secondary motif centres on a goddess seated on a chair formed by the tail of one of the lion dragons. She holds a branch or an ear of grain, and above her is an S-shaped sign known from the Proto-Elamite script<sup>10</sup>. The date of the cylinder at the height of the Akkad period was established on the basis of the resemblance to details in the rendering of the mountain guide on the cylinder of Kalki in the British Museum – that is, the animal tail hanging from his quiver and the chignon, both of which resemble details of the figure with the lion helmet on the Rosen cylinder.

A comparison with the cylinder of Adda in the British Museum (pl. 30) serves to distinguish the style of one made in an Akkadian centre of Mesopotamia from a cylinder assumed to have come from southeastern Iran. The cylinder of Adda shows a group of major deities with a scale

pattern like the Iranian cylinder. In both cases the pattern probably indicates the earth in a mountain landscape. Here the similarity ends except for the fine execution. The difference between the cylinders concerns the treatment of space and the relation between the figures. In the Iranian cylinder the space is tightly filled, whereas in the Mesopotamian cylinder the open space has the figures appear as against a wide background. In addition, all the Mesopotamian gods seem to be involved in the same event although perhaps the god on the left, whom Henri Frankfort identified as the heroic god Ninurta (Frankfort 1939: 137), stands somewhat apart. In the Iranian cylinder each figure seems to be isolated within its own emblematic elements.

The serpents that emerge from under the armpits of the god whose headgear is crowned by the head of a bull are reminiscent of the serpents with goat demons seen on the early stamp seals. The serpents that are so dominant on the stamp seals, however, appear as minor symmetrical and decorative elements in the beautifully executed cylinder seal. This is a work in which the religious concepts of the time are carefully carved in detail on the cylinder, displaying the deities in their full context.

Although all the cylinders related to the style of pl. 29 show differences in the arrangement of the scene, there are some similar features. Thus, the central figure enclosed within a radiant aura in pl. 29 is not unique. A related design appears in another cylinder in the collection of Jonathan P. Rosen (pl. 31), said to have been purchased in Afghanistan. Its style, called *trans-élamite* by Amiet (1986a: 298–300, figs. 132–7) has been documented at the sites of Shahdad and Tepe Yahya in southeastern Iran and is also represented in several unprovenanced cylinders.

The figure in the aura of the new cylinder is a diminutive enthroned personage holding a double-curved object, probably meant to represent a serpent, as in the related context of pl. 29. I take the figure to be female, although it does not have discernible breasts, probably because it is too small to have them shown by the same large drillings as the larger figure with horns in the same register. To the right of the enclosure sits a large figure with bull's horns and one hand raised probably toward the figure within. The sex of the figure is not indicated. Another centre in the upper register is a second bull-horned figure with clearly defined female breasts. With extended arms she grasps the branches of two trees. There is some damage to the seal in the lower part of her legs, on one side of which there are five drillings; on the other side is the head of a horned animal.

The figure with the trees belongs to a group of representations on cylinders of this style which show bull-horned deities associated with plants (Amiet 1986a: fig. 132). The characteristics of the trees in pl. 31 are the crooked stems and the branches which are marked by nicks and curve down in the manner of the branches of willow trees. Such willow trees suggest an association with water and the fertility of plants.

In the lower register there are four long-haired figures, probably females, sitting on their legs on both sides of an object which may be a sign of writing. The women on the left have their pigtailed turned down; those on the right have them turned up. All have one hand raised, but the one on the far left holds both hands in the air. The women's function is not clearly indicated, but



an object above the two figures on the right might be an awkwardly carved lyre. In view of the harpist represented in the lower register of a cylinder of this group published by Amiet (1986a: 300, fig. 137), it is possible that the figures in the lower register represent an orchestra or a group of singers.

A question arises about the exceptional figure of a man at the end of the row of women in the lower register. So far this figure is not paralleled in any of the cylinders belonging to this group. The man is either in a kneeling or in a running posture. He is placed directly below the figure seated in the enclosure in the upper register. In view of the fact that the base of the enclosure was drawn across the raised hand of a figure seated in the lower register, it seems likely that these figures were drawn first and that the figures in the upper register, including the one in the enclosure, were carved after the lower register had been prepared. Was there a purpose in having the man below the figure in the enclosure? We cannot tell before we know more about the iconography of the group.

The style of the cylinder is dominated by small drillings of equal size which are employed to stress such features of the bodies as breasts or shoulders and to fill in remaining open spaces. They were probably added at the end of the engraving process. The earlier stage of the torso of a figure is seen on the figure in the enclosure on which two curving lines, indicating the shoulders and upper torso, meet at the waist. In part the engraving shows remarkable naturalism, as in its rendering of the willow trees, never so faithfully depicted in Mesopotamian art. At the same time there is little concern with natural proportions, for example, the bull-horned person sitting beside the enclosure has a very large head in comparison with the rest of the body. The concern is apparently not with the pleasing appearance of the seal design but with the completeness of the account of the ceremony that was to be related. The variation in the representation of such major figures as the serpent goddess in the enclosure in pls. 29 and 31 probably indicates that these deities were well known in texts for their distinctive accoutrements, such as the serpent in their hand, but their specific form appears to have been devised by the individual seal cutter and varied from site to site. It is impossible to determine whether the variety in the details of the iconography in Iran, in contrast with the relative uniformity in Akkadian seals, was due to the lack of large pictorial models in central places or to a lack of communication of tablets bearing distinctive seal impressions. The last examples mainly showed the differences between roughly contemporary cylinder seal designs of Mesopotamia and Iran. The following small disc will show the problems which arise from a close stylistic relation over vast distances.

The disc (Fig. XI a-c) belongs to the middle of the third millennium BC, to that period called Early Dynastic in Mesopotamian archaeology, when Susa returned to being a modest Sumerian type town as demonstrated by Amiet. The disc is of especially fine lapis lazuli and is a promised loan from Mr and Mrs Jonathan Rosen to the Pierpont Morgan Library. It has relief carving on both sides, a seated figure on one side and a man-headed bird of prey with two horned victims on the other side. A simple linear decoration runs around the middle of the body. The shape of the disc is similar to one found in Egypt in the Tod Treasure (Fig. 18). That treasure was an accumulation of precious materials from different sources, probably for use in a





18 Two-sided lapis lazuli disc.



19 Two-sided lapis lazuli disc.

local temple workshop, packed in caskets with the name of King Amenemhat II, 1929–1895 BC (traditional chronology). The disc from the Tod Treasure depicts a winged creature on each side <sup>11</sup>. Imaginary winged creatures are common on seals from Afghanistan, the northern parts of which were ancient Bactria. In the disc from the Tod Treasure the specific type of wing with the ends rolled up has not been paralleled so far among the numerous Bactrian seals from unrecorded excavations. Eventually it may be found among the artworks of that region.

The second such disc is in the Louvre (Fig. 19) as a gift of the late Mohsène Foroughi and published by Pierre Amiet (1986a: 296, fig. 128). In the man and the woman portrayed on the disc there is an alternation – or should we call it a ‘balance of power’ – in which on one side a man with a long braid squats before a female who is seated on a chair whereas on the other side, a woman squatting on the floor hands a cup to a male figure in a chair, much as later Achaemenid ladies serve a drink to a seated male figure (Boardman 1970: pl. 880).

The alternation of the person who is in the position of power with another person of equal standing is a theme in Iranian art first encountered in the Proto-Elamite period when such an exchange of the position of dominant power is observed between bull and lion (Amiet 1980: nos. 585, 591).

We now return to the Rosen disc, on view in the Morgan Library (pl. XI a-c). There we find a figure of a type which we can identify with great probability as a figure of authority because of its seated posture. That posture is not found in Mesopotamian art before the Early Dynastic period. When it occurs, it is reserved for the chief person of a scene, as in the standard of Ur on

which the king is further distinguished from his officers, with whom he participates in a banquet (Woolley 1934: pl. 91), by a multiple-tiered skirt or kilt which did not appear before the reign of King Urnanshe of Lagash, who is dated about 2550 BC.

The figure on the disc has the gesture of clasped hands with raised thumbs, probably a gesture of prayer, that characterises the gesture of King Eannatum I or II of Lagash, *c.* 2450 BC, on a fragmentary stele in the British Museum (pl. 32).

On the other side of the disk a man-headed bird of prey grasps two horned animals in the manner, as can be seen elsewhere, of a lion-headed eagle. The tight composition of the motif is seen from the time of Urnanshe's successors onward, as on the stele of DUDU, priest of the god Ningirsu, on which the lions bite into the wings of the lion-headed eagle (Parrot 1948: 89, fig. 22e).

A cursory examination of the motif of the lion-headed eagle with its victims shows that there are variations which may be locally based. Ubaid had the monstrous bird with giant stags (Frankfort 1954: pl. 27A); Girsu and perhaps Lagash as a whole had lions for the royal monuments; Mari had mountain goats (Parrot 1965: pl. XIV, 2); and an unknown northern Syrian site, whose offering stand was published by Evelyn Klengel-Brandt (1966), seems to represent a type of sheep. Finally Ebla, in the limestone inlays recently discovered by Paolo Matthiae, had an alternation of one register with lion-headed eagles grasping human-headed bulls and another with soldiers defeating their enemies (Matthiae 1990: 398–405).

Ever since the lion-headed eagle was identified by the French scholar Thureau-Dangin as *Imgig* (later *Imdugud*), which was the standard symbol of the god Ningirsu, it has been regarded as the symbol of a god of rainstorms and fertility and has been interpreted in cosmic terms. However, one of the earliest representations, a cylinder seal of the Late Uruk period, about 3000 BC, shows lion-headed eagles guarding military captives (Brandes 1979: pl. 12b). It seems likely, therefore, that from the beginning the figure was also associated with warfare. The appearance of the lion-headed eagle on the great stele of Eannatum as the crowning element of a net in which defeated enemies are held by the god, presumably Ningirsu (Frankfort 1954: pl. 35), reinforces this interpretation.

I therefore interpret our little disc as showing on one side the ruler figure in a gesture of prayer and on the other side the symbols of victory of the king's country: the man-headed bird and the typical goats of the surrounding region.

There remains on the side of the disk bearing the seated ruler the inscription by Rimush, son of Sargon, the first ruler of the Akkad Dynasty. It says 'Rimush, LUGAL KISH', and probably indicates that it was the property of Rimush. That king fought against Elam and Barahshi, (also called Marhashi<sup>12</sup>), which was known as a source of carnelian, lapis, and other semi-precious stones. It was probably situated in the area of Fars and Kerman in modern Iran. This is the area where Amiet places the origin of the Foroughi piece and from which I think the disc also comes. Rimush doubtless had his disc inscribed when he obtained it and when it was already about 200 years old. The fact that it was made of lapis lazuli was surely the main reason for adding it to his treasures.

The principal value which the disc has for modern scholarship is the remarkably close relation of the little figure with the Sumerian ruler on the stele fragment in the British Museum. This becomes all the more surprising when the great distance between Lagash and southeastern Iran is measured. The small disc shows the remarkable association of Sumerian and Iranian works of art over vast geographic distances.

In reviewing the diverse visual material presented in this essay one may admire the ability of the artists of the early periods to give a sense of the then prevailing ideas concerning natural and supernatural beings which writing and perhaps even language were not yet ready to describe.

## Notes

- 1 See the lecture by Nissen in this volume.
- 2 The cylinder, pl. 24, and the stamp seals pls. 25–27 were brought to my attention by Sidney S. Babcock who made the impressions of which I reproduce my photographs with the kind permission of the owner, Jonathan P. Rosen.
- 3 Amiet 1972: nos. 949, 999, 1001. Unperforated cylinders of contemporary or earlier style are Amiet 1972: nos. 804, 1066.
- 4 See the boot in the Uruk period cylinder (Porada 1948: no. 1), which caused Frankfort (1939: 20) to identify the scene as in a leather workshop. Probably contemporary boot-shaped amulets were found at Tell Brak, reproduced by Barnett (1966: pl. XXIII, 7). Boots with upturned toes are worn by the mountain guide in the cylinder of Kalki in the British Museum (Collon 1982: no. 141).
- 5 For a discussion of the dating of the Susa impression see von Wickede 1990: 198–204.
- 6 Good examples are found in Boehmer 1975: pl. 126 a–f.
- 7 With the permission of Millard F. Rogers, Jr., Director of the Cincinnati Art Museum, I am publishing an article on ‘the kneeling figure bound with snakes’ (quoted from *Masterpieces in the Cincinnati Art Museum*, 1984, p. 31) with a full description in the forthcoming *Festschrift for Eva Strommenger*, ed. B. Hrouda.
- 8 Wiggermann 1981–82: 95. It seems, however, that the significance of the nude bearded hero depends on his accoutrements. For example, he is represented with mountain boots on the sculptured base of a cup from Tell Agrab (Frankfort 1954: pl. 6c) where he controls two felines in a display of power over the beasts, a very different function from the one of the Cincinnati figure.
- 9 A. Parrot reported recognising the figure as the replica of the Cincinnati figure which he had seen in the shop of a dealer several years before (Parrot 1951).
- 10 Oral reference provided by Holly Pittman.
- 11 For drawings and a discussion of the disk see Porada 1982.
- 12 See Steinkeller 1982: 254.

# The Context of the Emergence of Writing in Mesopotamia and Iran<sup>1</sup>

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In the modern world, writing is one of the basic tools of civilisation. It would be nearly impossible for anyone to orientate himself in the modern world without the aid of a script. However, were someone asked what writing means in the context of higher civilisation, the answer would very likely consist of reference to the great religions of the world being called ‘religions of the book’, and to the great epics of mankind like the *Gilgamesh Epic*, or the *Odyssey*. Although transmitted orally for hundreds of years before being written down, it was only after they were put in writing that they became basic elements of western culture.

Compared with these purposes, the use of writing for economic matters and in daily life is considered to be marginal, even inferior or profane, although this use is much more widespread. It would be taken as even more degrading if writing were characterised as merely a system of information storage. Quite obviously, writing has for us a very high cultural connotation.

It comes as all the more of a surprise that the earliest systems of writing which emerged 5000 years ago in the Ancient Near East in Babylonia and Elam made their appearance as a means of information storage within the general framework of economic administration. Only 200 to 300 years *after* the first appearance of writing in Babylonia do we find the first short inscriptions of non-economic character – so-called votive or dedicatory inscriptions – and only again 300 years later do we find longer inscriptions which we may call literary or which we can at least attribute to the genre of royal inscriptions. Writing has ever since been highly valued for its role in culture and education<sup>2</sup>.

There is another surprising factor. Writing seemingly makes its appearance without earlier stages. From the very beginning we can count approximately 1200 to 1400 different signs of unexpectedly stable shape. While many are clearly pictograms, i.e. signs which still allow us to



recognise the item represented, a large number are purely abstract. To be sure, there existed individual symbols earlier on, used in the decoration of pottery or the like, or as potters' or property marks, but there are no older traces of a full system using more primitive signs<sup>3</sup>.

My lecture is intended to try to explain the use of the early script for administrative purposes and the sudden appearance of a fully developed writing system as events within normal processes. Basically I will focus on the development in Babylonia, because more comprehensive information is available for this region. Only at the end will I discuss the Iranian developments as well.

It is not only writing that emerges apparently suddenly close to the end of the fourth millennium in Babylonia and southwestern Iran. In particular in Babylonia, writing is only a part of a host of novelties which all come under the heading of 'Early High Civilisation', or in another concept of 'Urban Revolution'. According to our information, within a short space of time there appear monumental buildings, monumental works of art, cylinder seals that are to become one of the most characteristic features of Babylonian culture, the new technology of the potter's wheel, and cities of up to 50,000 inhabitants. The results of intensive research in a number of fields have added much to our knowledge of this period lately. As a result we can now begin to formulate a comprehensive picture of the developments which led to the appearance of writing.

Babylonia denotes roughly the area between the point where the Euphrates and Tigris come closest together, near the modern city of Baghdad, and the head of the Persian Gulf to the south. The area is almost flat owing to its development from the former delta area of the big rivers which, since time immemorial, have been silting up the rift valley east of the Arabian Shield. The extremely fertile soil, irrigated by the waters of the rivers, provided the basis for the ancient culture of Babylonia. With high and low points, this civilisation flourished for more than 4000 years, before events under the late Sasanian kings of the fifth century AD, the Islamic conquest of the seventh century and finally the Mongol invasions of the twelfth century caused the system of irrigation canals to collapse and the country to convert to steppe or desert conditions.

Susiana is an area similar to Babylonia, to the east of it, in the modern province of Khuzistan in Iran. Likewise, it is an alluvial plain formed by the lower courses of two rivers, the Karun and the Kerkha. Yet, there are significant differences in size, in climate and rainfall-pattern.

Since the middle of the nineteenth century, these areas have been the target of a number of archaeological expeditions that have resulted in information being revealed about such famous ancient cities as Babylon, Ur of the Chaldees, Uruk and Susa. From these and other investigations, enough information has been gathered to form an idea of the sequence of rulers and of the development of art. This has been supplemented by whatever could be gained from studying the numerous surviving texts.

The situation is different for the older periods, primarily because of the lack of written information. Here, everything has to be extracted from archaeological evidence. Through the clearing of buildings and the discovery of accompanying finds, excavations have led to a reconstruction of the topography and the history of such places.

In the entire Ancient Near East, Babylonia is the area by far the best known to us.

Fortunately, the time of the appearance of early writing, i.e. the last several centuries before 3000 BC, figures among the better documented periods since we have command of an enormous range of information both from the large city of Uruk and from other places within Babylonia as well as from neighbouring areas. Since Uruk remains the main source of information for this period, we shall first consider the settlement at this site.

During the Late Uruk period, at the end of which we see the appearance of writing, the city of Uruk encompassed an area of at least 2.5 square kilometres (Fig. 20). To be sure, we have no direct data about the number of inhabitants, but with the help of ethnographic data from the pre-modern Near East we have come to accept a figure of 100–200 inhabitants per ha (= 10,000 square metres) of settled area. If we deduct the central area of roughly 20 ha used for non-domestic purposes we end up with a figure of roughly 230 ha of settled area, which suggests a number of between 25,000 and 50,000 inhabitants of Uruk at the end of the fourth millennium BC.

It may be helpful to compare this size to that of other major settlements of the ancient world. Jerusalem at the time of Herod covered an area of *c.* 120 ha, and Athens at the time when Themistocles built the Long Walls to include Piraeus had a total area of *c.* 210 ha. The city of Rome of Augustus encompassed *c.* 360 ha. This means that Uruk at the end of the fourth millennium BC was already twice the size of Jerusalem 3000 years later and was larger than Athens at the time of its greatest expansion in antiquity. It may be mentioned in passing that 200–300 years later Uruk had doubled its size and, with slightly less than 600 ha around 2900–2800 BC, covered an area almost double the size of Rome under Augustus.

From these comparisons alone it becomes obvious that the sheer size of Uruk suggests that we are not dealing with a normal town. And, in fact, there are a number of other factors that point to the same conclusion.

The first indication comes from looking at a plan of the city. Archaeologists take advantage of the fact that on the surface of each old settlement there are remains of the original repertoire, consisting primarily of sherds of broken pottery vessels once used in the houses. Normally, thousands of such sherds cover the entire surface. Just as shapes and decoration allow us to distinguish between French and English tableware, and between seventeenth and eighteenth century china, such differentiation can also be applied to ancient pottery. All it needs is someone familiar with the sequence of pottery styles through the ages in order to date such surface finds. On the assumption that the date of the surface finds reflects the date of the occupation of that site, we get a rough idea of the period of occupation of any particular settlement.

A detailed survey of the area of the city of Uruk was thus able to suggest which parts of the city were inhabited during which periods (Finkbeiner 1991). In this way we arrive at the figures given above. At least 12.5% per cent of the city's area was occupied by public space, strongly suggesting that central functions played a major role, and we even get the impression that the central areas were excessively large in relation to the residential quarters. This is not so, however, if we bear in mind the possibility that Uruk's administration served not only the city's



20 Plan of the city of Uruk. Hatching indicates the area probably occupied during the Late Uruk period.



population but also that of the surrounding area. And it is here that we find our second clue to the importance of Uruk.

What I said before about reading from surface finds not only applies to areas within cities but even more so to larger regions. In these cases, this procedure helps us in localising and dating the sites of ancient settlements even if they left behind no monuments or standing remains of buildings. One such investigation has focused on recovering information about ancient settlements in the area around the city of Uruk.

This archaeological surface survey of an area of approximately 3,700 square kilometres traced the remains of over 500 settlements of all periods (Adams and Nissen 1972; Adams 1981). Settlements displaying the same kind of surface finds, thus suggesting they had been occupied at the same time, were joined to form maps. By comparing these settlement maps of different periods, conclusions could be drawn from the changes in settlement-size and settlement-density over that time. The results were astonishing.

For the last period before the onset of the Early High Civilisation we found eleven settlements dispersed over the whole area. This indicates a very low density, with the settlements at such great distances from each other that they could hardly have had any close institutional ties<sup>4</sup>.

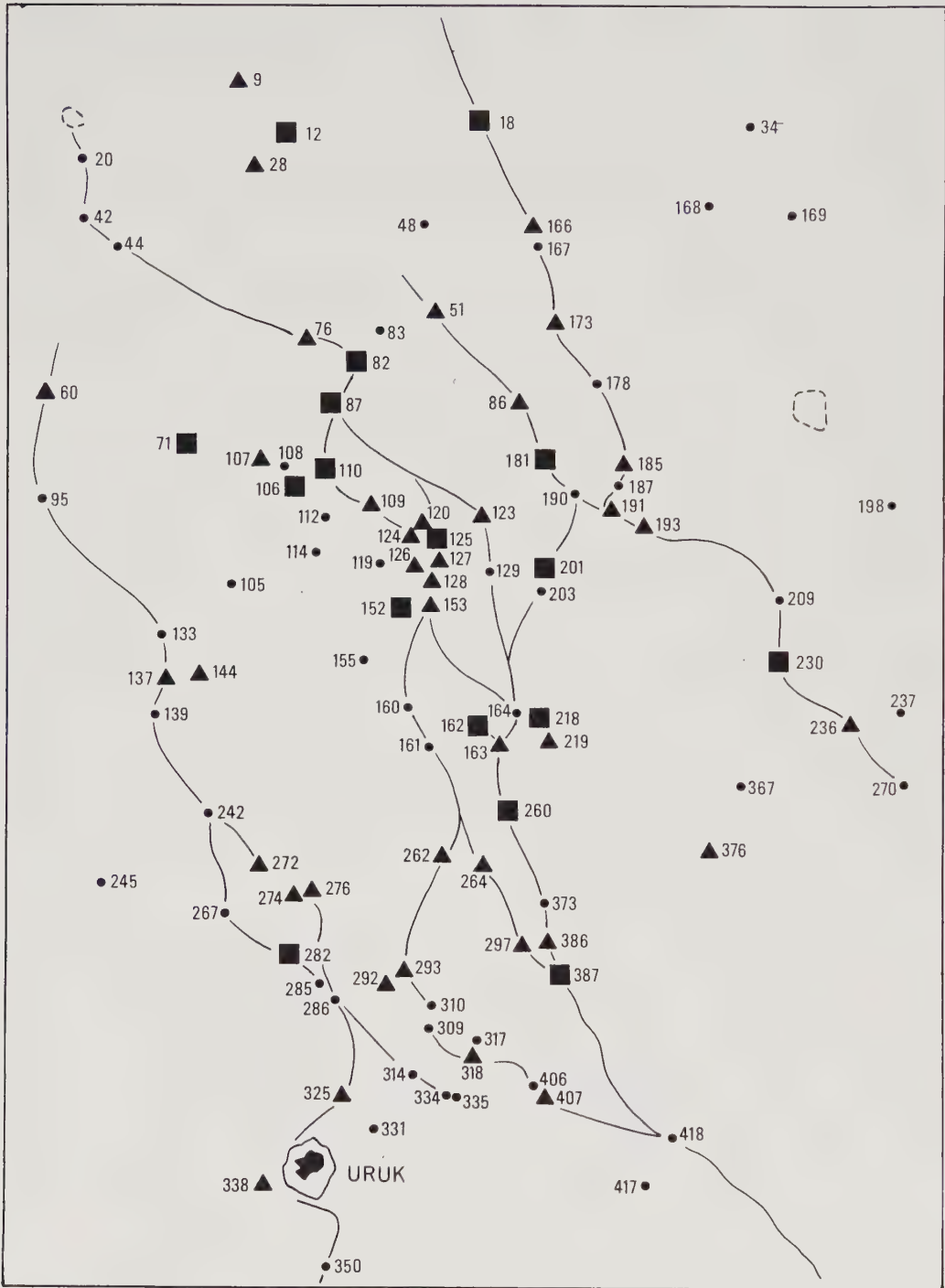
The situation changed completely in the subsequent Late Uruk phase, since we found approximately 110 settlements to have co-existed in this period, of a size suggesting a population of between 30,000 and 60,000 people (Fig. 21). Assuming that the size/inhabitant ratio remained the same from one period to the next, we seem to be faced with an increase in the population of several hundred per cent within a period of at most 200 years. Obviously, this cannot be the result of a natural increase, leaving as the only possible explanation a massive influx of people. However, there is no indication where such immigration may have originated from, nor who the immigrants were. It has been suggested that it was the Sumerians who entered the country at this time – if we subscribe to the idea that the Sumerians were indeed later arrivals. In any case, this increase in the number of settlements is indicative of dramatic changes and fast developments.

We find that the settlements do not lie in a random pattern, but that they form certain clusters, the basic pattern of which consists of a larger settlement surrounded by smaller ones. Geographers would call this a settlement system, assuming that the larger settlement houses specific functions which serve not only its own population but also the people from the other settlements.

Considering the varying sizes of the settlements, we can distinguish four different size categories in the Uruk area, with the larger settlements always being more or less in the centre of arrays of smaller settlements. While we found 24 settlements of a size of 1 ha or less, 46 settlements in the category between 1 and 5 ha, and 18 between 5 and 20 ha, Uruk with its 250 ha stands out overwhelmingly as the largest of all. There can be no doubt that it was the most powerful centre in the area.

As we shall see when we look at the administrative texts of this time, there is much evidence for the range and size of the economic transactions executed in the central area of Uruk. Thus,





21 Map of the surrounding area of Uruk, showing settlements occupied during the Late Uruk period.
































certainly, some of the animals and of the grain brought to and stored in the central warehouses did originate in the countryside, although we know next to nothing about the actual procedures involved in such movements.

Obviously, Uruk was the central administrative place of a large and rich agricultural region in addition to being a large urban centre. It is interesting to note that the growth of Uruk into such a centre probably did not take a long time. We may assume that this rapid development demanded an equally rapid extension of means of control on all levels, be they political or economic.

We are not sure about the exact date of the appearance of the earliest written documents, because of those clay tablets found, not a single one has been discovered in the place where it was written or used. All of our close to 5000 tablets from Uruk were found in rubbish layers together with potsherds, bones, ashes and broken clay sealings, distributed over the entire area of Eanna. Obviously, like everything else, these clay tablets had been discarded when they were of no further use. Only because we occasionally find buildings of the following period built on top of such layers of rubbish are we able to attribute the earliest documents to the Late Uruk period (Green and Nissen 1987).

As already mentioned, some of the signs represent more or less naturalistically the objects they are supposed to stand for (Fig. 22). Thus a human head, a human hand, the heads of various animals, and a stalk of barley can all be recognised. More often, however, we have the difficulty of trying to detect a natural model behind a rather abstract shape, or the sign is altogether abstract: a cross inserted into a circle standing for a sheep can hardly be anything other than an abstract symbol.

The level of abstraction that is already found in the earliest documents from Uruk has led to suggestions that there existed a still earlier system of writing of which no trace has yet been found. We shall see presently that such arguments are superfluous. But first, let us briefly survey the nature and contents of the early documents.

ca. 3100	ca. 3000	ca. 2400	ca. 2000	Meaning
				SAG "Head"
				NINDA "Bread"
				GU "to eat"
				AB "Cow"
				APIN "Plow"
				KI "Place"
				"10"
				"1"

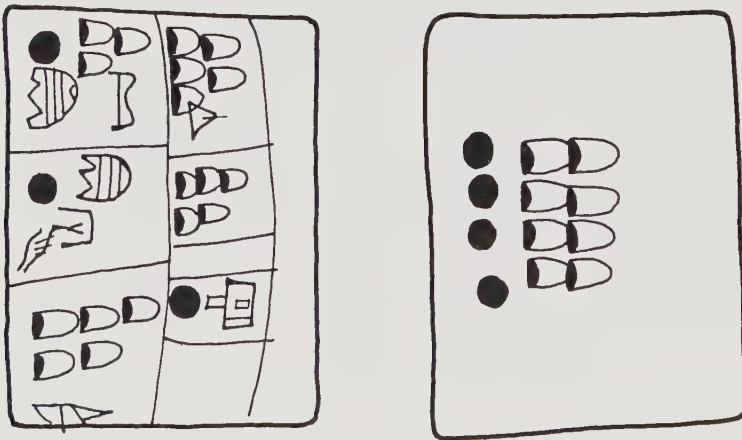
22 Development of some cuneiform signs.

Obviously, we are dealing with two sets of signs impressed into the surface of clay tablets by means of a reed stylus: the round or elongated impressions, and the more complex ones consisting of a number of incisions. The first represent numbers while the latter are the actual writing signs, or ideograms. They are organized in cases separated by long incised lines dividing the surface of the tablet into a grid. Normally, such cases contain varying numbers of numerical signs plus a varying number of ideograms. From the beginning, it was clear that these tablets must belong to the category of administrative documents dealing with economic transactions of varying quantities of goods. In fact, over 80 per cent of all archaic tablets belong to this group.

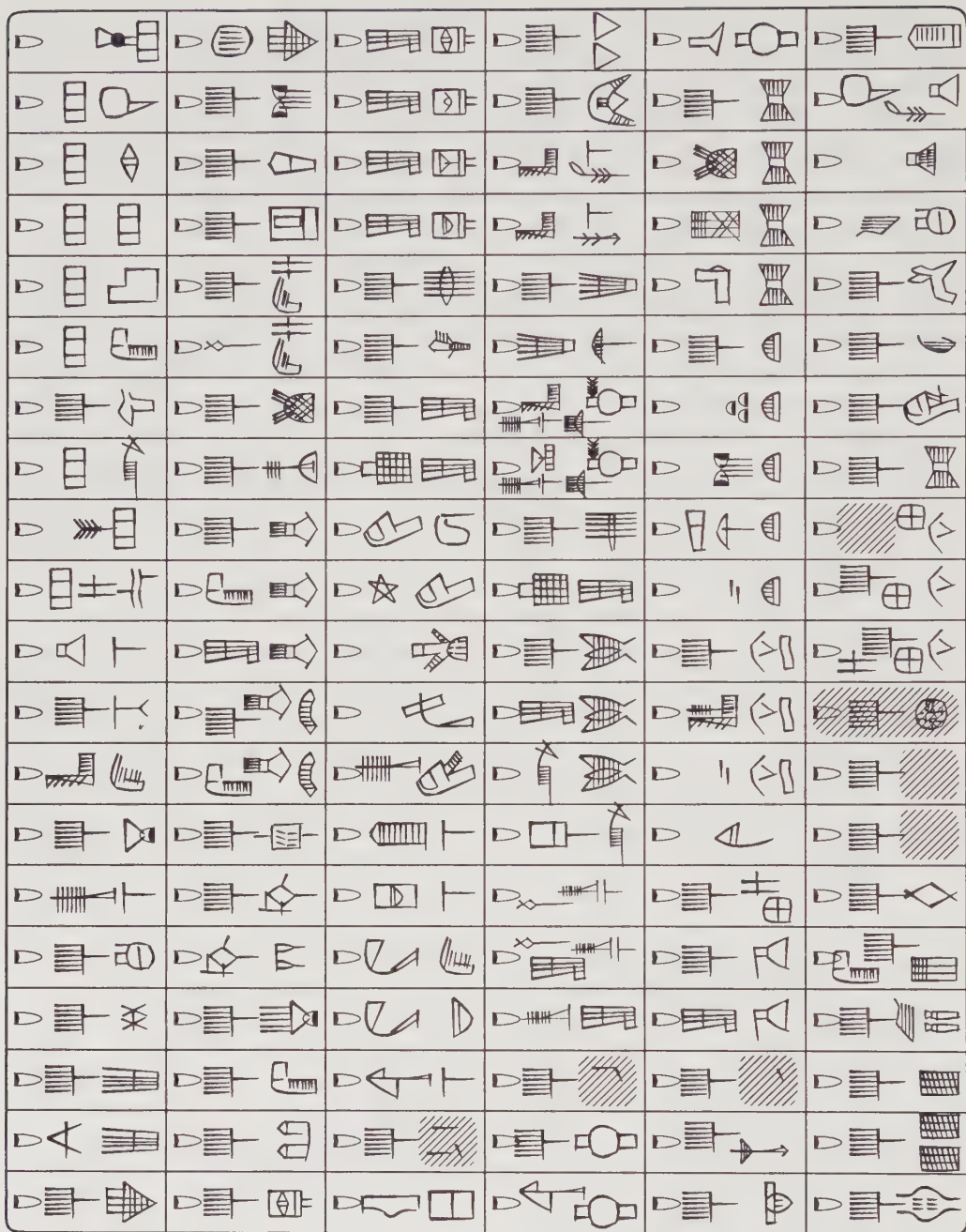
One principle of arranging the information on the tablet is shown in Fig. 23. Here, there is a larger number on the reverse than in any of the various cases on the obverse. Converting these into real numbers it soon turns out that the number on the reverse represents the total of all individual numbers on the obverse. Thus an easy record could be kept of the total number of daily entries or exits into or from a warehouse.

There were, however, tablets diverging from this layout in that every case began with the sign for 'one'. Similarity to the later texts of the cuneiform tradition was soon apparent, and it was clear they could be classified as lists of words and specific items which were grouped according to their affiliation to a larger semantic family. Like their later counterparts, they would list not only names of cattle, birds, fish or trees, but also names of places, textiles and metals (Englund and Nissen, *in press*).

A list of titles and professions deserves special attention (Fig. 24). Of particular interest is the fact that the entries seem to be ordered according to rank. Thus we find, for instance, that the list begins with a composite sign for which we find the translation of 'king' in a later text. The next entries contain titles of high officials signified as the heads of certain departments or areas of responsibility. For instance, we find the head of law, the head of the city, the head of the plough, or the head of barley. They are followed by various classes of priests and lower officials.



23 Obverse and reverse of an administrative document (W 6710a) dating to the oldest stage of writing.



24 Composite drawing of the list of titles and professions.

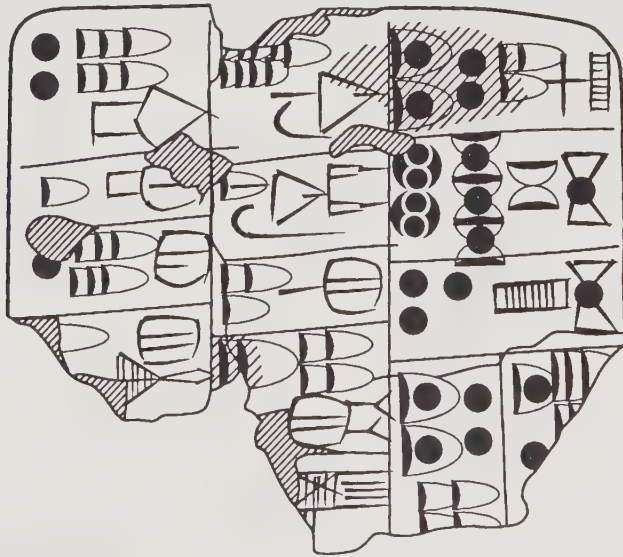


Some of these titles we meet again in the administrative texts as those of either administrators or recipients of certain contributions allotted to them by the central administration.

Quite obviously, the layout of the list mirrors the actual structure of part of the society. Since copies of this list were found among the very earliest written documents, we may conclude that the situation represented is not only that of the time of the early documents, but most probably the situation which already existed before. This list then is of primary importance since it may reflect the state of society in the time even before the existence of writing.

We are not sure about the meaning and origin of these lists, yet one thing is clear: these lists were copied over and over again for many centuries. We not only find large numbers of contemporary copies – for instance we have over 160 different copies of the titles and professions list among the Archaic Texts of Uruk alone – but they were recopied over a period of 600 years or more, painstakingly retaining the same order of entries and signs. We assume that copying these lists was one of the main features in the process of learning to read and write. At the same time, they may go back to oral traditions which, by ordering and memorising such enumerations, attempted to establish intellectual control over one's surroundings.

In the archaic economic texts, three large groups stand out as the most numerous. They deal with the administration of herds of animals, with the storage of barley and the administration of its processing, and with textiles. In addition, there are many other subjects mentioned in the texts. They deal, for example, with fish and with metals, with the distribution of food, with the organisation of labour and with the measuring of fields. In passing, I would like to note that one document (Fig. 25) records 18,120 units of cheese entered into the central stores (centre of the



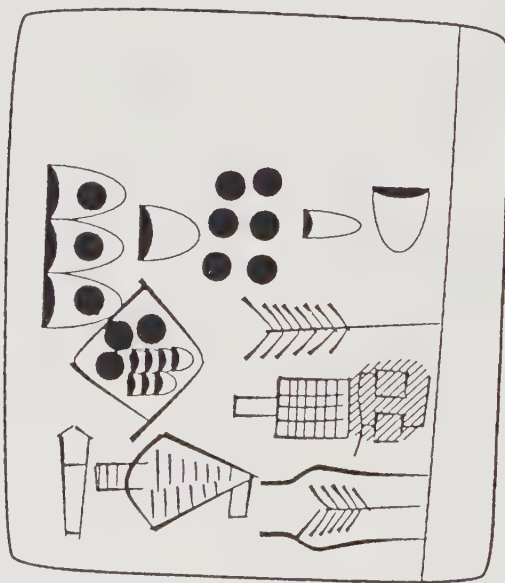
25 Administrative document (w 20274, 97) dealing with animal products.

lowest column). Other texts report on the brewing and distribution of 783 units of beer, or the distribution of up to 9,600 units of bread. These figures give us a vivid picture of the quantities and the size of the transactions which had to be controlled by the central administration.

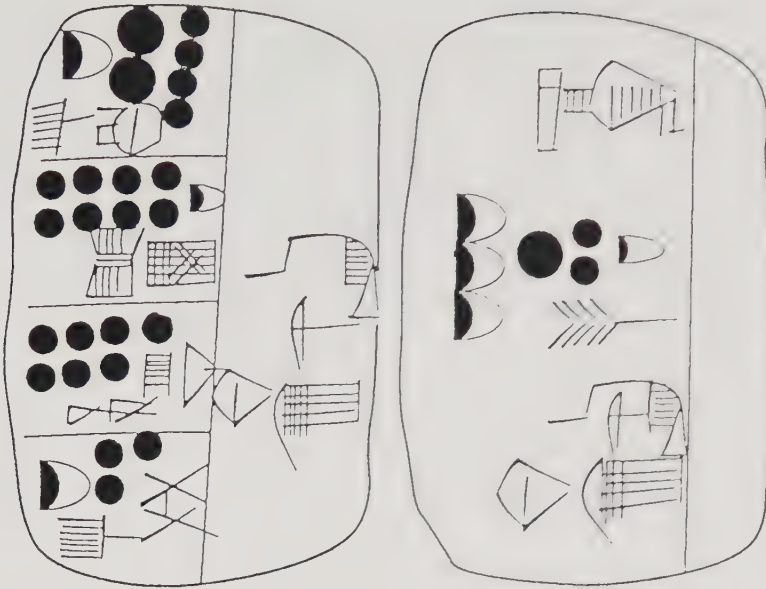
Among the texts under investigation, there are some of particular interest since they seem to come from one archive<sup>5</sup> and deal with the daily business of one official whose name we happen to know, if the signs have been read correctly. Let us then assume that his name was Kushim.

Kushim is mentioned on eighteen tablets. Most probably he was the head of a department administering raw materials for the brewing of beer but also storing large quantities of barley. His name occurs mostly in connection with two barley products, barley groats and malt. Both are important ingredients in the brewing of various kinds of beer. Again, the quantities are exorbitant; one tablet (Fig. 26), for instance, lists the amount of 135,000 litres of barley. This figure does not appear quite so extravagant when we learn from the same tablet that it denotes the total amount of barley which Kushim had dealt with in thirty-seven months. Sign by sign this tablet reads: 135,000 (litres): barley: total: 37 months: Kushim: (for) exchange(?).

At the same time this tablet gives a good indication of the difficulties we still have in interpreting these texts. Only catch words are written down, giving the minimum information needed for reconstructing the transaction. Verbs are not used, nor are any grammatical elements that differentiate for instance between subject and object. The kind of transaction is indicated only by adding a sign specific to it. Nothing was written which might have been supposed to be common knowledge. Even when an entire tablet is preserved, therefore, the contents are still difficult to understand.



26 Administrative tablet totalling the amount of barley spent in 37 months.



27 Administrative tablet mentioning the allotment of barley. Actual size.

Another tablet (Fig. 27) clearly demonstrates the main principle of the book-keeping system. On the obverse of the tablet we see on the left side four compartments each filled with various numerals and some written signs. To the right are some more signs which we cannot read except for one, which may have the meaning of allotment. From the reverse we learn that the entire tablet is dealing with amounts of barley. This sign is accompanied by signs for large quantities, totalling 14,712 litres of barley, or close to 9 tons. As was previously the case, this results from summing up the numbers in the four cases of the obverse. The signs accompanying each of the four quantities are known to be the titles of high officials, two of which we know from the first group of entries in the titles and professions list mentioned above. In other words, certain amounts of barley were distributed to four people, and a record is being kept both of the individual transactions and of the total amount of barley which has left the storehouse.

Other examples could be produced of texts where similar principles are being used, such as in the administration of herds, but the texts already illustrated suffice to show the basic principles and rigidity of the book-keeping system.

We have seen that the earliest texts bear witness to the existence of an already advanced and universally applicable system of book-keeping. The vigorous control of entries and exits from the central stores and even of the movement of goods and finished products between departments of the same establishment enabled the administrators to keep a firm grip on economic developments. In fact, this system was so well established (and essentially the one still in use many centuries later) that we must presume a long period of formulating rules to have antedated early writing.

At this point, I should like to stress again the fact that except for the category of lists, all texts belong to the economic sphere, without a single example that could be called religious or literary. The obvious conclusion is that writing came into being as a recording system for economic data. And in fact, the entire system with its juxtaposition of signs, and the absence of any prepositions or syntactical elements, is well suited to storing the basic information of economic transactions, but certainly not for rendering prose or even poetry.

Returning to the question of whether the possibility exists of a still older system of writing which has escaped our attention until now, I think the question has been wrongly phrased: one should not seek an older system of writing but older systems of information storage. In fact, this leads to a totally different approach.

Seen this way, writing is a system allowing storage of any information one wants to keep. If the early texts are silent on many details, then this is not because of the inadequacy of the system but because it was not felt necessary to give more information. Such a universally applicable system does not develop overnight, and we may assume that there existed older systems of information storage of a more limited range.

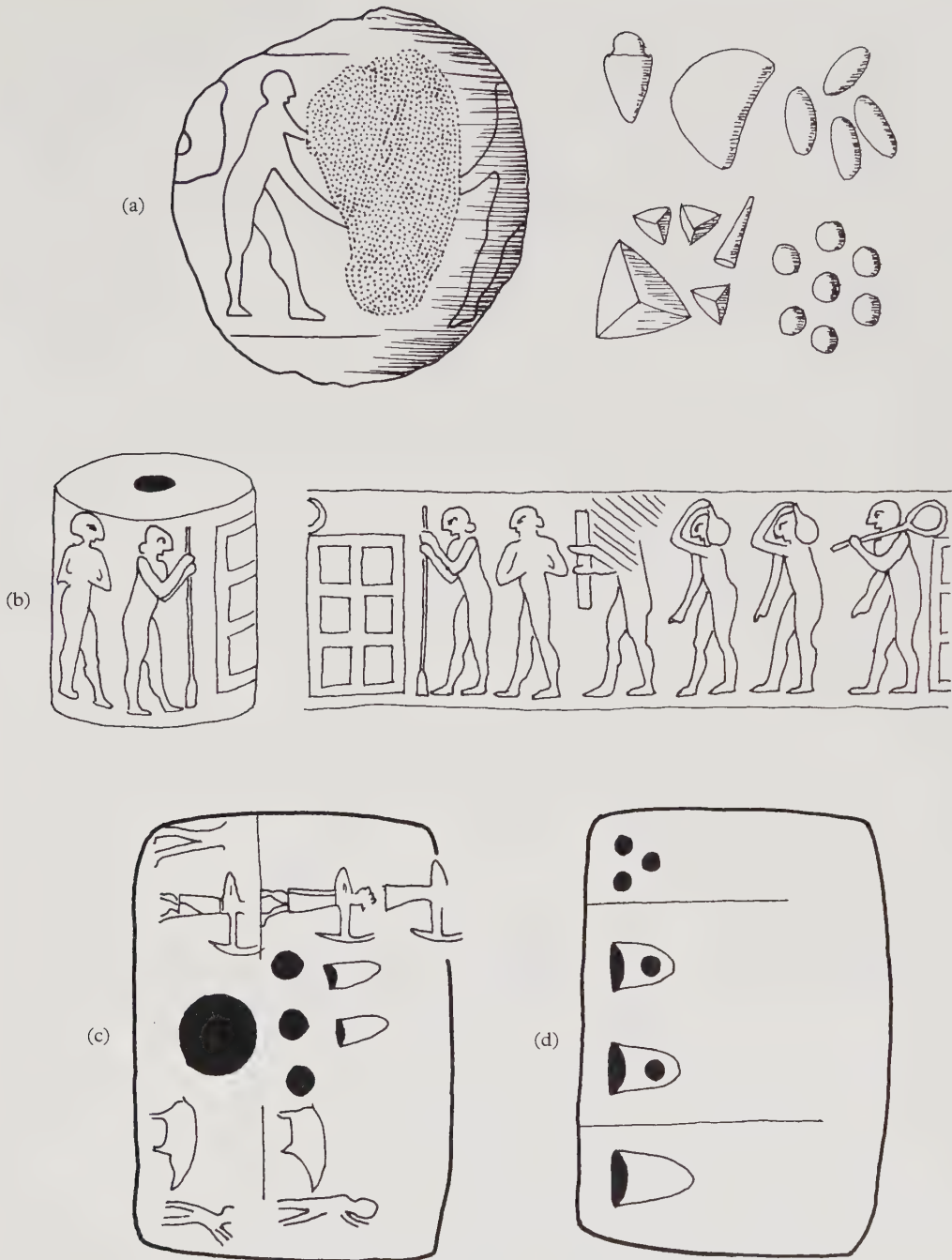
Looking for such systems one does not have to go very far. Still on clay tablets, we find only quantities marked. Clearly, the possibilities of storing information are limited here to one kind of information, namely quantities, while everything else, such as the nature of the items counted, the identity of the persons involved, and so on, was left for the 'reader' to insert (Fig. 28d).

Next, we find the even older system of attaching specific numerical values to particular shapes of pebble or items of clay and forming any quantity by joining such items, or tokens (Schmandt-Besserat 1977). In order to protect these totals from being dispersed one might imagine them being held together in a basket or leather bag (Fig. 28a). Again, all additional information had to be introduced by whoever 'read' the record.

But there is more. Not too long before the emergence of writing we see the so-called cylinder seal replacing the old stamp seal. Now, patterns were engraved into the surface of stone cylinders which had to be rolled on the surface of the item to be sealed in order to produce a relief (Fig. 28b). As far as we can see, the main purpose was to seal the clay covers used for closing all kinds of containers, whether jars or bags or entire rooms. In a society which depended very much on central storage, it was necessary to be able to keep strict control over the staples.

The advantage of the cylinder over the stamp seal was the much larger size of the affected surface, giving a higher degree of security against manipulation. At the same time, the cylinder seal offered a much larger space to be decorated. Apart from offering an opportunity for artistic expression, a richness in patterns was necessary in order to ensure that everyone who needed a seal as part of his role in administration could have an individual pattern. The purpose of applying a seal was not only to mark the item but also to show under whose control a specific item was sealed. Thus it was necessary to be able to identify the owner of the seal from its impression, possible only if every administering individual was given an unmistakable seal. In





28 Precursors of writing:

- (a) Sealed clay bulla and clay tokens from Uruk.
- (b) Cylinder seal and impression from Uruk.
- (c) Sealed numerical tablets from Uruk, w 20239.
- (d) Numerical tablet with several entries from Uruk, w 10827.

this sense, seals are another means of storing information, this time about persons. But again, the capacity is limited to one item of information.

Probably a bit later we find the first attempts at combining the two methods of recording. For instance, we encounter clay balls which have been shaped around a pile of numerical tokens of the type just discussed. Security was increased by applying seal impressions to the surface of the ball, thus naming the person whose authority guaranteed the correctness of the contents (Fig. 28a). In this way the range of information was increased since now quantity plus identity of person could be recorded.

Coming still closer to writing was another system of combining the recording of numbers and person. Clay tablets marked with numbers only would in addition receive the impression of a cylinder seal (Fig. 28c), thus storing information on both quantity and person.

There must have been many different attempts to find more effective means of administrative control, traces of which either no longer exist or have escaped our attention until now. In any case, it seems only natural that after all these experiments, a system should emerge that offered the ultimate solution to the problem of the accumulation of information. With writing there are no limits, since in addition to numbers and information about the officials responsible, details about the itemised goods, about time, about the nature of the transaction, and so on, can all be recorded. It was probably very obvious to everyone engaged in earlier attempts at storing information that this system was the final answer, and it is probably for this reason that the system of writing did not take long to be formulated. Therefore, it should not come as a surprise to find writing developing to a full system within such a short span of time that from our telescopic viewpoint it seems to have been a sudden event.

Considering what we have heard before about the fast pace in the development of settlement systems and economy, we should have no problem in seeing the necessity to extend the means of information storage as part of the answer to the growing needs for control mechanisms.

At the end of the Late Uruk period, we find everything that constitutes the so-called Early High civilisation. Only 200–250 years may have elapsed since the beginning of that phase, thus seemingly underscoring the suddenness of the appearance of everything mentioned above. However, if we take a closer look at phenomena like large cities or monumental buildings, it seems unlikely that they should have sprung up all of a sudden. Further, it is difficult to believe that a system of widely interspersed, isolated settlements should have been followed immediately without a major interlude by a settlement pattern with at least four different levels of size and hierarchical range.

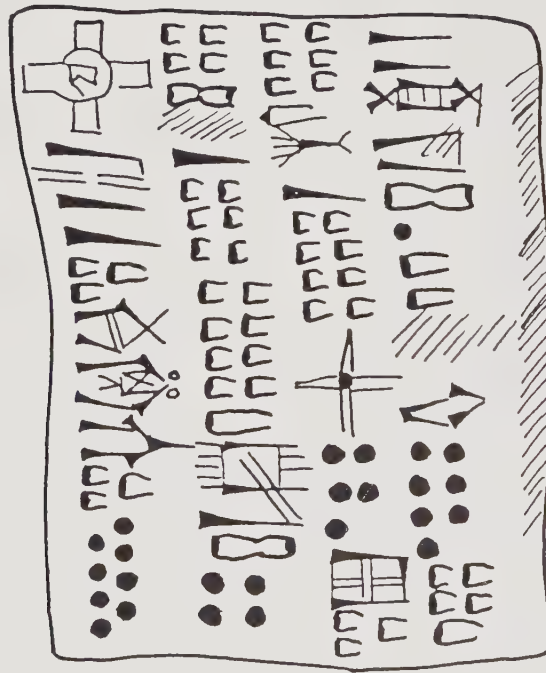
There is a possible explanation, however, if we consider the developments in Susiana. Here, in the plain and its mountainous hinterland we see a long, uninterrupted line of development from a situation of isolated settlements in remote mountain valleys in the seventh and sixth millennium BC, to two- to three-level hierarchical settlement systems in the fifth and fourth millennium BC (Hole 1987), i.e. 400–500 years earlier than in Babylonia. At a time when Babylonia was still very sparsely settled, Susiana had already attained a high degree of political

organisation. It seems likely that people in Babylonia made use of the example of their eastern neighbours when they had to build up an administration.

But why should Babylonia have been settled on a large scale only later than the surrounding areas? Even there, recent research has helped us. Investigations into the climate in antiquity have indicated that until the middle of the fourth millennium BC the amount of water carried by the Tigris and Euphrates rivers was probably quite large, and the water-level in the Gulf was high. From that time on, however, the water-level in the Gulf apparently started sinking as the water-level in the rivers dropped. Our assumption is that after the middle of the fourth millennium BC, water receded from the formerly inundated lower flood-plains and that, therefore, for the first time it became possible to settle this plain on a large scale (Nützel 1975).

There remains one other point on today's agenda: where does the appearance of writing in Susiana fit into this picture? Again we are faced with seemingly contradictory evidence. From what I have just said about continuity in that area it would be logical to assume that things developed at the same pace as in Babylonia. But this is not what we find.

To be sure, there are pitfalls in attempting to establish chronological links between Babylonia and Susiana, but everything points to a picture in which the local continuous development in Susiana was at one point superseded by the entire range of Babylonian Late Uruk culture (Carter and Stolper 1984). But while we find some of the earlier means of information storage in Susiana as well, like numerical sealed tablets, or clay balls with enclosed numerical tokens,



29 Proto-Elamite tablet from Susa. Actual size.

actual writing seems to have appeared slightly later than in Babylonia, but still around 3000 BC. When it does appear, it makes use of the same basic elements of making impressions with a stylus on clay tablets, but the writing system is different, as is already the way of arranging the information on the tablet (Fig. 29). Instead of using a grid to write into, signs are written in columns with a marker separating one piece of information from the next (Le Brun and Vallat 1978).

Though much work has already been done on these tablets we are still at an early stage of the investigation; all I can say is that apparently the administration of Susiana was very similar to that of Babylonia, and that so far we have not found a single example of a lexical list.

Just as strange as the comparatively late appearance of writing in Susiana is the fact that this local script disappears after a couple of centuries without any apparent successor. While Babylonian archaic writing underwent changes which after a short while rendered it the most successful writing system of the Ancient Near East, the cuneiform system, proto-Elamite writing did not develop, and when it fell out of use it was not replaced for some five centuries. When later in the third millennium BC the necessity to write was again felt in Susiana they had to import the developed cuneiform writing from Babylonia.

Although this difference in development cries out for an explanation, we can hardly do more than speculate. Remembering that writing came into being in Babylonia as the final act in a sequence of pressing economic developments, and seeing that in Susiana writing did not develop by itself but was adapted from Babylonia, a simple explanation would be that developments in Susiana were not so dynamic that solutions to new situations had to be found. Yet, conditions were so similar that whenever solutions to common problems were provided from somewhere else they were recognised as such and were readily accepted.

In the same vein, the sudden end of writing in Susiana can be explained in that the same circumstances which prevented the emergence of writing in its own right may have been those blocking autonomous development and finally leading to the end of its usage in Susiana. But when it comes to naming these circumstances we are at a loss.

During this lecture, I have made an effort to describe the context in which writing emerged and to show that early writing in the Ancient Near East originated as a universally applicable means of storing information. It took a long while before those aspects of writing appeared that are commonly believed to be its most distinguished function: writing literary and religious texts.

At the same time, I have pointed to data which allow us to form a comprehensive picture of pre-writing times. In fact, there are clear indications that all those complex structures characteristic of the phase of early writing had already developed much earlier. Or in other words, when writing finally emerged, the development of the basic economic, social and probably political structures had already been completed; later developments were but refinements. But to elaborate on these ideas would be another topic.



## Notes

- 1 More information can be obtained especially from Nissen 1986; Nissen 1988a; Nissen 1988b; Nissen, Damerow and Englund 1990; Englund 1988; Green 1981.
- 2 My partners in the attempts to decipher the archaic writing of Mesopotamia are the Sumerologist Dr Robert K. Englund (Freie Universität Berlin) and the mathematician Dr Peter Damerow (Max-Planck Institut für Bildungsforschung, Berlin). It is largely due to their efforts that our programme has made such tremendous progress over the past few years. Evidently, a large part of what is said here about the early Mesopotamian writing system is derived from their contributions.
- 3 This is probably true also of a clay jar stopper found by the British expedition to Tell Brak in northern Syria showing the drawing of a complete animal (Jasim and Oates 1986: 358–9, fig. 4a, pl. 2b).
- 4 Due to constant re-evaluation of the data the figures given here differ somewhat from those given in Adams and Nissen 1972. Even so, the pattern remains valid.
- 5 It may be appropriate here to mention that these archaic tablets were formerly part of the Erlenmeyer Collection; most of them were bought by the Senate of Berlin at a Christie's auction on 13 December 1988 (pl. XII). Incidentally, among the four tablets bought by the British Museum on the same occasion there is one mentioning the official Kushim (Nissen, Damerow and Englund 1990).

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# Illustration Acknowledgements

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Abbreviation:

BM = Photo by courtesy of the Trustees of the British Museum

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- 9 Musée du Louvre, Sb 4842. Amiet 1966, pl. 57
- 10 Private collection, previously unpublished
- 11 Musée du Louvre, Sb 1484. Amiet 1966, pl. 53
- 12 Lamberg, Karlovsky and Tosi 1973, fig. 18

- 13 Musée du Louvre, Sb 24. Amiet 1966, pl. 131
- 14 Formerly in the Foroughi Collection
- 15 Private collection. Amiet 1986a, fig. 73
- 16 Cecile de Rothschild Collection
- 17 Musée du Louvre, Sb 2724. Amiet 1986a, fig. 65
- 18 Musée du Louvre, AO 26757. Amiet 1986a, fig. 121
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- 21 Ashmolean Museum, 1924. 475. By courtesy of the Visitors of the Ashmolean Museum, Oxford
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- 29 Rosen Collection. Porada 1988, pls. I–III
- 30 BM, WA 89115. Collon 1982, no. 190
- 31 Rosen Collection
- 32 BM, WA 130828

#### Colour plates

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|------|---|-----|--|
| I    | Musée du Louvre, Sb 3214. Amiet 1966: pl. 6 | IX  | Cincinnati Art Museum, no. 1957.33   |
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| VI   | BM, WA 122206–8                             |     |  |
| VII  | BM, WA various numbers                      |     |  |
| VIII | Iraq Museum. Photo Bernard B. Bothmer       |     |  |

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1 Decorated chlorite basin, said to have been found at Khafajeh.



2 Fragments of decorated chlorite vessel from the excavations of Sir Leonard Woolley at Ur.



3 Stone plaque with handle found in the excavations of J. G. Taylor at Ur, but probably imported from Iran.

4 Two ceremonial axes obtained by Sir Percy Sykes from Khinaman, near Kerman.







5 Bronze axe with silver inlay showing a tiger attacking a goat.



6 Bronze tankard with an inscription in Sumerian and Akkadian recording that it has been made for Attahushu.



7 Painted pottery beaker from Susa.



8 Alabaster statuette of a kneeling figure from Susa, Uruk period.



9 Proto-Elamite tablet from Susa with a seal impression.

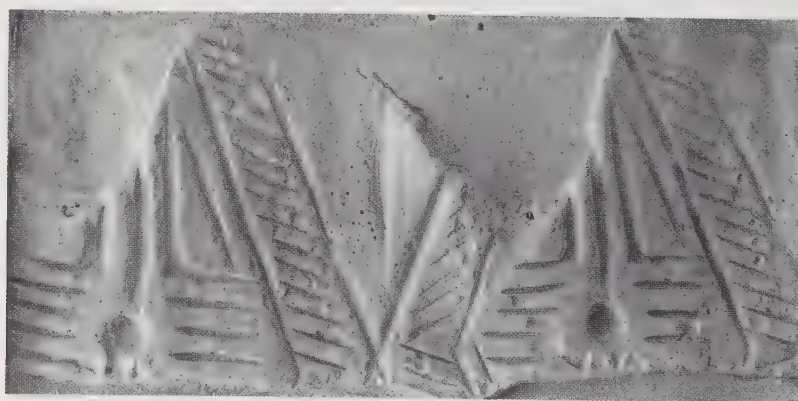




10 Proto-Elamite tablet from Susa with a seal impression.



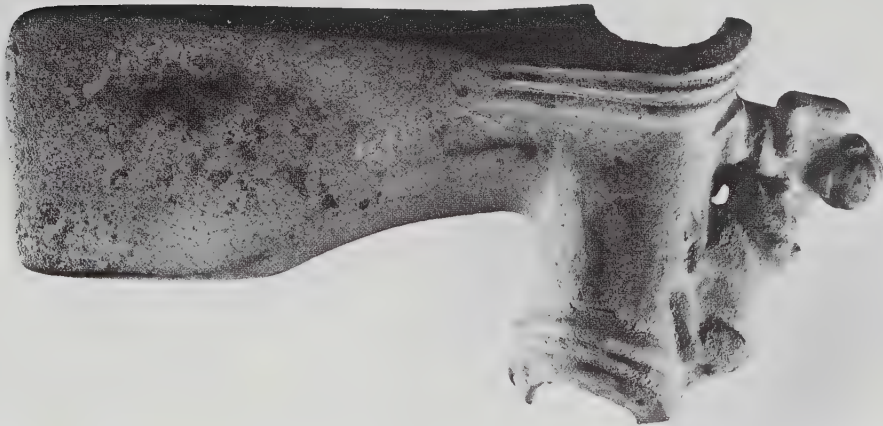
11 Modern impression of a proto-Elamite cylinder seal from Susa.



12 Modern impression of a fragmentary seal from Shahr-i Sokhta.



13 Part of alabaster votive plaque from Susa.

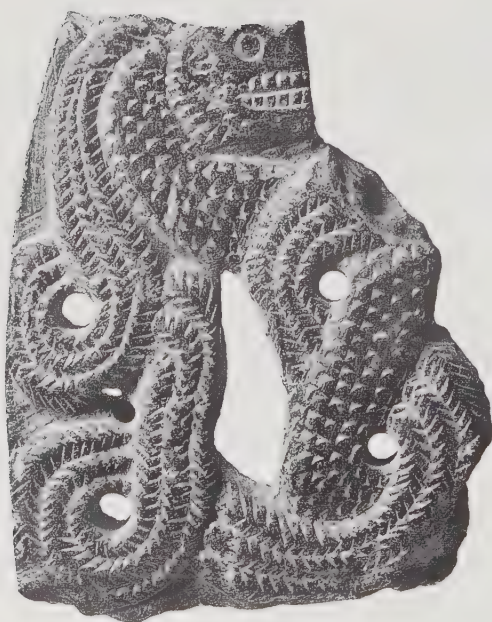


14 Copper/bronze axehead of Luristan type.





15 Chlorite goblet with Sumerian inscription.



16 Fragment of chlorite plaque.





17 Bitumen plaque with relief decoration from Susa.



18 Copper/bronze axehead similar to an unpublished example from Shahdad.



19 Silver vase with Elamite inscription, said to be from the Marv Dasht plain.





20 Figure of Bactrian type in chlorite and white limestone.



21 Front of the lower part of a tablet inscribed with lines 136–62 of the Sumerian narrative poem *Enmerkar and the Lord of Aratta*, describing a 'golden age'; c. 1800 BC.

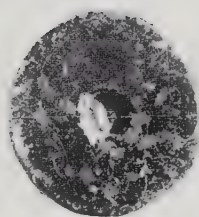


22 Model of a boat made of bitumen, from a grave at Ur, *c.* 2300 BC, typical of the vessels used on the waterways of Sumer.



23 The 'Weld-Bundell' Prism inscribed with the best-known copy of the Sumerian King-List; *c.* 1800 BC. This document offers vital evidence for the ebb and flow of relations between Sumer and Elam.

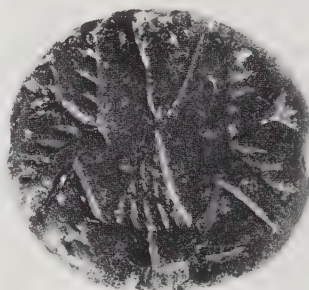




24 Cylinder seal with a hunting scene. Greenish-black chlorite? D. 30 mm, H. 27 mm. Unperforated, shallow hole on top.



25 Stamp seal with a goat-headed demon controlling serpents. Black chlorite? D. 69 mm, H. 24.5 mm.



26 Stamp seal with animal-headed demon controlling (?) two birds of prey. Dark grey chlorite? L. 41 mm, W. 38 mm, H. 16 mm.



27 Stamp seal. On one side is a goat-headed demon controlling two serpents, on the other a horned animal and a serpent. Dark grey chlorite? D. 43.5 mm, H. 11.5 mm.





28 Impression of a shell cylinder seal.



29 Impression of a shell cylinder seal.



30 Impression of the cylinder seal of Adda with an epiphany of deities.



31 Impression of a cylinder seal showing deities in the upper register, with a row of female figures below. White marble. H. 43.3 mm, D. 25 mm, hole 4.7 mm.





32 Fragment of a relief of Eannatum I or II in the British Museum.





1 Painted pottery bowl from Tepe Djowi.





II Copper/bronze mace-head of Luristan type.



III Copper/bronze axehead of Luristan type.



iv Copper/bronze axehead of Luristan type.





v The so-called 'Ur Standard' (c. 2600 BC), perhaps the sounding-box from a musical instrument, inlaid with a scene of booty- or tribute-delivery, illustrating the two Sumerian beasts of burden: men and equids.





VI Diadem and roundels of gold, cornelian and lapis lazuli – all materials available from Iran – from a child's grave at Ur, c. 2000 BC.



VII Beads of agate, cornelian (some etched with patterns in white), lapis lazuli and green bloodstone found in graves at Ur, c. 2350–2000 BC. Some at least were imported from the Indus Valley region (modern Pakistan).

VIII *Opposite* Upper part of a grey alabaster statuette from Uruk.









XI Alabaster sculpture showing kneeling hero with serpents, said to have been found at Tell es-Sukhairi.









IX *Opposite* Male copper figure with goat-horn cap.

X a, b, c. Two-sided disc. On one side a seated king, on the other a man-headed eagle grasping two horned animals. D. 21.5 mm, thickness 8.2 mm.



XII Administrative Text.







**Vladimir Lukonin** (1932-1984) was a distinguished Russian scholar who was Head of the Oriental Department of the State Hermitage Museum in St. Petersburg. In his short career he published more than a dozen books, mostly on aspects of Parthian and Sasanian Iran and Central Asia, including a volume on the Sasanian seals in the Hermitage and another on the Sasanian silver that appeared posthumously. An important book on the art of Ancient Iran (*Iskusstvo Drevnego Irana*) has recently been published in German under the title *Kunst des alten Iran*. Long before this, his book in the 'Archaeologia Mundi' series, *Persia II* (1967), ensured that his name became known to scholars around the world. These and other books were important contributions to Iranian Studies, and have assured for him a lasting reputation in this subject, but there was more to Vladimir Lukonin than just his scholarship. His warm and engaging personality endeared him to all with whom he came into contact, and in the Cold War years he did much to establish contact between scholars of Ancient Iran from both east and west. When he died at the early age of 52, therefore, a group of his friends, led by The Hon. Mrs M.A. Marten, determined to establish a Fund in his memory (administered by the British Academy). Although not directly connected with the Fund, the memorial lectures at the British Museum came into being as a direct result of publicity for the Fund.

**John Curtis** has been Keeper of Western Asiatic Antiquities at the British Museum since 1989. He is interested in both Mesopotamia (Iraq) and Iran, and has worked and travelled extensively in both countries. Between 1983 and 1989 he directed excavations in Northern Iraq on behalf of the British Museum, working first at various sites in the Eski Mosul Dam Salvage Project and then at Nimrud and Balawat. Amongst his publications are *Ancient Persia* (London 1989), *Excavations at Qasrij Cliff and Khirbet Qasrij* (London 1989), *Nush-i Jan III: The Small Finds* (London 1984), and he has edited *Fifty Years of Mesopotamian Discovery* (London 1982) and *Bronzeworking Centres of Western Asia* (London 1988). He met Vladimir Lukonin in 1979 when he escorted the Oxus Treasure to St. Petersburg for a temporary exhibition at the State Hermitage Museum. He is a Trustee of the Vladimir G. Lukonin Memorial Fund.

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